UNIVERSITY OF GHANA

A COMPARATIVE ANALYSIS OF THE PERFORMANCE OF VARIOUS FINANCIAL ASSET CLASSES OVER THE PAST DECADE: A CASE STUDY OF GHANA

BY

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(FINANCE OPTION)

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CERTIFICATION

I hereby certify that this paper constitutes my own product, that where the language of others is set forth, quotation marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions or writings of another.

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DECLARATION

I hereby certify that this thesis was supervised in accordance with the procedures laid down by the University.

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DR. CHARLES ANDOH **DATE**

(SUPERVISOR)

DEDICATION

This thesis is dedicated to my mother: Mary Charity Pobee and my brother: Vernon Obeng-Darko for their support towards my education.

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My humble gratitude goes to the Almighty God for his guidance and motivation towards the successful completion of this work.

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However, I am completely answerable to any limitation that may be detected in this work.

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

Mfund: Mutual Fund

GSE: Ghana Stock Exchange

CAPM: Capital Asset Pricing Model

TABLE OF CONTENTS

ABSTRACT

The study sought to provide a comparative analysis of the performance of the various financial asset classes over the past decade in Ghana. The study employed a quantitative technical trend analysis on bond, stocks and Mfund over a period of 10years. Also, the econometric model of GARCH (1,1) was employed to calculate the risk orientation of the various asset classes. From the results, the study found that the three classes of assets employed for the study, that is bond, stocks and Mfund on the average seems to be performing well on the financial market over the years. Comparatively the study also found that of all the three asset class bonds in Ghana offered by the government is considered as the safest and the best performing financial asset of all investment packages with a less risk orientation. Evidently, assets that guarantees higher returns equally has a higher risk orientation. The study revealed that the bond market provides a longer period of maturity and rewards in Ghana. The riskiness of the bond market seems to rise high than that of the stock and mutual funds as it also rewards investors with higher returns. It is recommended that fund managers of various asset class should be effectively monitored and regulated to adhere to the ethical principle of the profession. This will bring sanity within the investment environment to prevent undue advantage fund managers take as a result of their agency relationship with investors. This reduces the trust within the investment environment.

Key words: *Stock, Bonds, Mutual funds, Riskiness, Financial Asset Class*

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Today securities on the financial market has improved significantly in major economies as it provides economic boost to nations. This is so also, because investors have recently seen much improvement in their returns as they engage in the financial market (Copeland and Weston, 1988). The financial market in current literature represent a market in which participants trade financial securities (stocks and bonds) and derivatives (futures and options) as suggested by Pilbeam (2010). The term "market" is usually used to represent an exchange and hence an organization that facilitates the trade in financial securities are known to be the stock exchange or the commodity exchange.

Much exertion has gone into the study of financial markets and the trend of security prices over time (Groz, 2009). Charles Dow, one of the originators of Dow Jones and Company and The Wall Street Journal, articulated a set of thoughts regarding the matter which are currently called Dow theory. This is the premise of the purported technical analysis method for attempting to anticipate future changes. Over 25 years of operations, the Exchange currently list about a total of about 42 equities and 97 Government bonds (Yamoah, 2016). Amongst these developments on the Ghana Stock and Bond market so far, includes the automation of the bourse, the establishment of an alternative market for SMEs, and the creation of a fixed income market for trading in fixed income securities The Exchange is also considering the establishment of a commodities market in 2017 to facilitate easy access to capital to the agricultural sector There is also an on-going discussion between the Ghana Stock Exchange and three other markets in the West African region; Cote

D’Ivoire, Nigeria and Liberia, on the pursuit of an integrated capital market According to Yamoah (2016), this integration will foster greater investor and issuer access to stock markets in the region. Thus, promote investment activities on the bourse (Central Securities Depository, 2016).

These developments are required to enhance and improve performance of the exchange market furthermore, increase organizations' access to capital Therefore, efficiency and productivity should increase, every other thing being equal, leading to growth and development in the economy. Given the essential role of the Stock Market to Ghana's economy, it is essential to know whether the stocks and bonds on the Exchange is satisfying its motivation in economic development or not, so the goal that the fundamental steps be taken to ensure the most advantage of having a securities exchange is procured particularly in a period like this when the nation's economy is in shambles Against this foundation, this study tries to acquire insight knowledge into a comparative analysis of the performance of various financial asset classes over the past decade on the Exchange market of Ghana.

Additionally, as an investment analyst in the Pension Fund Management industry, this study is of much interest to the researcher as it helps to identify and analyze the trends and volatility in the behavior of asset classes. This is likely to inform the researcher on future decision in investment as well as to ensure pensioners have better retirement benefit plans.

1.2 Statement of the problem

Levine (1996) contends that, albeit developing markets account to a great extent to the world's securities exchange boom, there might be a possibility that developing nations are most certainly not profiting as much from their very own securities exchanges as some foreign financial investors seem to be Along these lines, the question that should be addressed is, does stocks market in developing nations add any value to the economy of these nations While the contribution of stock market in economic development is all around reported in nations with advanced capital markets, few investigations have been done on developing markets in developing nations Levine (1996) reports the purpose behind this occurrences, a few researchers see markets in developing economies as "clubhouse" with next to none or no monetary effect All things considered, they see no compelling reason to lead ponders on such inadequate markets

Osei (2005), Osamwonyi and Kasimu, (2013), and Dziwornu and AwunyoVitor (2013), Darkoh (2006), Adusie (2014) and Ayensu, Musah, Opare and Osafo (2012), are among few examinations on the Ghana Stock Exchange and financial development, in any case, creating differing findings For instance, Osamwonyi et al. (2013) examined the causal heading between securities exchange performance and economic development, in three developing markets to be specific, Ghana, Nigeria and Kenya utilizing the cross-country approach From their Granger causality test, they found that, there exist no causal connection between developing markets and monetary development in these three nations

Most of these studies as discussed above sought to provide an understanding of how the various assets and commodities traded on the financial and exchange market impact on economic growth.

Yet, to the best of the researcher's knowledge none have pursued to uncover and clearly demonstrate a comparative analysis of the performance of various financial asset classes in the case of Ghana. Therefore, this study sought to reduce that deficiency in the literature whiles providing a comprehensive atmosphere to provide a trend of past performance and comparison of assets in the financial market.

1.3 Purpose of the study

Comprehensively, the overall purpose of this study is to provide a comparative analysis of the performance of the various financial asset classes such as bonds, stocks/shares and mutual funds over the past decade in Ghana.

1.4 Research objectives

As the study generally seeks to provide a comparative analysis of the performance of the various financial asset classes over the past decade in Ghana, the study is motivated to formulate the following specific objectives;

I. To examine the performance of the various classes of asset such as stocks, bonds and mutual funds in Ghana.

II. To provide an assessment of the risk associated to these various classes of assets (stocks, bonds and mutual funds) in Ghana

III. To provide a comparative analysis of the classes of assets (stocks, bonds and mutual funds over the past decade in Ghana.

1.5 Research Questions

As motivated by research's problem statement and also in other to arrive at an objective conclusion and to aid address the study objective, the study seeks to ask the following questions;

I. To examine the performance of the various classes of asset such as stocks, bonds and mutual funds in Ghana.

II. To provide an assessment of the risk associated to these various classes of assets (stocks, bonds and mutual funds) in Ghana

III. To provide a comparative analysis of the classes of assets (stocks, bonds and mutual funds over the past decade in Ghana.

1.6 Significance of Study

The significance of this research can be looked at from three different angles: research, practice and policy.

Concerning the research significance of this study, it will go beyond current or available research on financial securities because it will examine and make an overall comparison of financial assets in Ghana in various dimension. This will serve as a guide to future researchers working in the study area whereas building on existing literature on an analytical comparison of financial securities on various stock and bond markets with evidence from Ghana.

Concerning the significance to practice, this study will highlight the trend, performance of these securities on the financial markets and best practice associated with trading these securities. This in effect will provide avenues for making suggestions with regard to the risk associate to each asset whiles enhancing investors' confidence by providing more insight to investors on a comparative basis of the various financial class of assets in Ghana.

In terms of policy, this study will help establish the link if any between the historical trend, risk and performance of financial assets in Ghana. This will provide a guide to policy makers such that they are able to collaborate with these investors more in their bid to promote responsible trading, investment and enhance the development of financial securities in Ghana. Therefore, it will help investors understand the nature of the various classes of assets on the Ghanaian financial markets.

1.7 Scope and limitation of the study

The study seeks to provide a comparative analysis of the performance of various financial asset classes over the past decade in Ghana. The study will cover the operations of the financial market within Ghana, in their quest to advance and promote stock and bond trading within the economy.

This sector is arguably one of the most sensitive and complicated sectors in the country with majority of risk-oriented issues arising in the sector. Data will be collected from the Ghana Stock exchange and Bank of Ghana on the various classes of assets.

1.8 Chapter Disposition

The study will be structured into five (5) chapters.

Chapter one will consist of the introduction of the study. The chapter incorporates the problem statement, objectives of the study, research questions, the significance and scope of the study. Chapter two will comprise the literature review of this study. It contains a review of existing studies in order to retrieve information with which the study will be focused. Generally, the study will review both theoretical and empirical studies related to the study.

Chapter three will contain the methodology used in the study to arrive at the findings. This chapter discusses the research design, research instrumentation, target population, sampling procedure and the method of data analysis.

Chapter four will discuss the empirical results, through the analysis and interpretations of results. Chapter five which is the last chapter will provide a comprehensive summary and conclusions of the study a well as recommendations that are appropriate for both policy makers and further academic research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Most investors are known to be risk averse and will therefore try their best to reduce their exposure to risk whilst maintaining their level of return from their investments (Lizarazo, 2013). One of the approaches to accomplish this is through portfolio diversification that is, investors invest in a number of asset classes including stocks, bonds, real estates, among others (Wafula, 2014). Nasdaq refers to portfolio diversification as the situation whereby an investor invests in different asset classes and in securities of many issuers in an attempt to reduce the overall investment risk (Nasdaq.com). According to Markowitz (1952), diversification reduces portfolio risk and prevent any unlikely event in the event that one of the assets or securities fail in the market. The process of distributing investment capital across the various classes is known as asset allocation (Brown, Garlappi & Tiu, 2010).

Studies on asset allocation center around the involvement of a couple of asset classes to a conventional asset blend of stocks, securities and cash to determine to what degree an asset class ought to be incorporated to the key portfolio (Harvey, 2006). A definitive objective of this procedure is to develop portfolios that are ideal concerning some pre-indicated goals. As indicated by the hypothesis that began with Markowitz (1952), the activity of developing ideal portfolios is one of the adjusting expected returns against their commitment to portfolio risk. In the investment management industry, it is regularly acknowledged that an investor’s initial vital resource allotment choice is the most imperative determinant of the portfolio's investment performance

(Bogle, 1994). Be that as it may, experimental proof on common reserve and annuity finance venture hones appear to cast a few shadows on this conviction. Both Ibbotson and Kaplan (2000), utilizing information on US common and benefits assets, and Blake et al. (1999), utilizing information on U.K. benefits reserves, reason that while resource portion choices are the real determinant of return variety after some time, they are significantly less critical in clarifying return variety in the cross-section.

2.2 Theoretical Review

2.2.1 Efficient Market Hypothesis

This theory has seen much refers in literature on various studies on stock market prices. The theory suggests the flow of reflective information to participants on the exchange market. Prices of securities in the market change randomly and cannot be predicted (Thobejane, 2012). This idea of market efficiency infers that investors cannot have earn abnormal returns from insider trading because the asset prices reflect all valuable information the market (Fama, 1970).

According to Fama (1970), efficiency of the market is in three forms which are weak, semi-solid and strong. The notion behind the efficiency is that in each form of the efficiency of the market, no investor can use either historical, public nor private information to gain abnormal profit (Malkiel, 2003). Nonetheless, various studies uncovered that the market isn't completely efficient (Chordia, Roll & Subrahmanyam, 2005; Lim & Brooks, 2010). The Efficient Market Hypothesis suggests a method to test whether investors have the capacity to beat the market. In a situation where investors can create returns above what the market is offering, the Efficient Market Hypothesis is contradicted.

2.2.2 Modern Portfolio Theory

The use of Modern Portfolio Theory in scholarly writing resulted in the advancement of Capital Asset Pricing Model (CAPM), which was freely determined by Sharpe (1964) and Litner (1965). From CAPM, various performance measurements, for example, the Sharpe ratio, Jensen's alpha, the Treynor ratio and so on were inferred and utilized with the end goal of measuring performance. The significant assumptions of MPT that additionally hold in CAPM and have received criticisms from literature is the normality of asset returns distribution, the utilization of standard deviation to measure risk the rationality of investors (Sortino & Price, 1994; Hirshleifer, Subrahmanyam & Titman 2006; Sheik & Qiao, 2010).

In spite of the criticisms, the MPT still remains, in practice, the foundation of mean-variance optimization and portfolio diversification. Every investor aims at gaining the highest possible return at the lowest risk. In any case, the portfolio theory agrees that as the investor wants to generate higher return, he should be prepared to take on higher risk. Markowitz (1952) gave a technique for evaluating this risk and return trade-off by using the efficient frontier. The efficient frontier is plotted using mean-variance optimization tool and this enables the investor a portfolio that conveys the most noteworthy expected return for a given level of risk dependent on the investors' risk– return preferences. Fabozzi, Gupta and Markowitz (2002) posit that portfolio theory is a normative theory.

2.2.3 Post-Modern Portfolio Theory

Markowitz (1959) recognized that the utilization of standard deviation as a risk measure is considered inappropriate when the distributions of returns are not normal. Notwithstanding the proof found in behavioural finance it ends up obvious that standard deviation is not an adequate measure of risk. These limitations about portfolio hypothesis have been generally recorded in the literature (Ang, Chen & Xing, 2006; Rasiah, 2012; Pashaki, Gholizadeh & Taleghani, 2014).

Rom and Ferguson (1993) amended the Modern Portfolio Theory and proposed a metric that can capture the asymmetric conduct of investors which isn't considered in portfolio theory. They therefore replaced the standard deviation with semi-standard deviation to measure risk due to the reason that the standard deviation is unable to differentiate good volatilities from the bad ones. The Post-Modern Portfolio Theory likewise results in the improvement of performance measurements (i.e. the Sortino ratio), which consider the non-normality of return distribution when estimating the performance of asset classes (Gehin, 2004).

2.3 Empirical Review

Literature under stocks and bond performance has seen varying grounds, from investors' confidence to economic development and many more. Levine (1996) contends that, albeit developing markets account to a great extent to the world's securities exchange boom, there might be a possibility that developing nations are most certainly not profiting as much from their very own securities exchanges as some foreign financial investors seem to be Along these lines, the question that should be addressed is, does stocks market in developing nations add any value to the economy of these nations While the contribution of stock market in economic development is all around reported in nations with advanced capital markets, few investigations have been done on developing markets in developing nations Nsiah (2009) contends that, in as much as securities exchanges, regardless of whether best in class or rising, may act in some comparative ways, findings related to identifiable studies on advance or emerging markets may not have any significant bearing to developing markets because of contrasts in macroeconomic security and institutional productivity, for example, data detachment and frail directions

Osei (2005) and Dziwornu et al. (2013) played out the same Granger causality test, yet rather utilized time series approach utilizing information from as it were Ghana, the two study found a causal relationship between the factors, running from stock market advancement and performance to economic growth and development However, their study would have been upgraded if they had proceeded to demonstrate the kind of connection between the factors Darkoh (2006), Ayensu et al. (2012) Adusie (2014) and Ofori-Abebrese, et al. (2016) attempted to establish the connection between the two factors utilizing time series approach While Darkoh (2006) and Ayensu et al, (2012) found a substantial positive relationship between the market and financial development, utilizing Ordinary Least Squares models, Adusie (2014) and Ofori-Abebrese, et al. (2016) utilized a Vector Mistake Correction models and Autoregressive Distributed Lag models individually, and discovered a negative long-run connection between the two factors

Jensen and Murphy (1990) also established that an efficient stock market allows a business to increase its shareholders. This provides enhancement corporate governance and thus, decreases the agency problem by encouraging mangers to act in the interest of shareholders. The end result of this is an enhancement inorganization management, and the avoidance of waste, which then leads to a boost in output and growth.

The role of financial markets in the advancement of an economy is well established in many growth models In traditional growth theory, early works of Solow (1956) for which Robert Solow of the Massachusetts Institute of Technology received the Noble Prize, ascribes long-run economic growth to exogenous technical progress This is to say; growth rates are taken as given by forces outside the economic system Consequently, in the Solow growth model, financial development can only be linked to the rate of capital stock per worker (K/L), but not to their respective growth rates (K/Y) (Pagano, 1993).

2.4 Asset Classes in Ghana

2.4.1Treasury Bills

Treasury Bills are one of the securities in the money market in Ghana. Treasury Bills are short term which mature a year or less from the date they were issued. Treasury Bills in Ghana are usually issued with maturities of three months, half year and one-year. They are acquired at a cost that is not as much as their pay value and when they mature, the government pays the holder the full par value. Treasury bills are considered the benchmark of wellbeing since they have basically no risk (Gallagher & Andrew, 2003).

2.4.2 Negotiable Certificates of Deposit

Negotiable Certificates of Deposit is another security traded in the money market They are essentially the bits of paper that affirm that you have deposited a specific amount of cash in the bank, to be paid back on a certain date with intrigue (Gallagher & Andrew, 2003). Vast enterprises and different organizations purchase negotiable certificates of deposit when they have money they wish to contribute for a brief period of time and they tend to sell negotiable certificate of deposit when they need to raise more money.

2.4.3 Commercial Paper

Commercial Paper is likewise a security traded in the money market The commercial paper is a short-term promissory note issued by large organizations Gallagher and Andrew (2003) suggest that commercial paper is not secured implying that the issuing company does not give any property as guarantee that the moneylender (the person who purchases the commercial paper note) can take rather than an installment if the issuing enterprise defaults on the note That is the principle motivation behind the reasons commercial paper is just issued by monetarily solid and dependable firms

2.4.4 Banker's Acceptance

Banker's Acceptance is also short term. It is a debt instrument that a commercial bank guarantees to pay. It is likewise traded on the money market. This sort of security, along these lines, enables organizations to prevent issues related with the collection of payments from hesitant account holders (Gallagher & Andrew, 2003). Investor's acknowledgments are often utilized at the point when firms are working together globally on the grounds that they dispense with the stress that the moneylender should venture out to an outside nation to gather on an obligation.

2.4.5 Bonds

Bonds are just a security compose where by a financial specialist consents to credit cash to a organization or government in return for a foreordained loan cost In the event that organizations need to grow, one of its alternatives is to acquire cash from individual speculators, benefits funds or mutual funds (Ayensu et al., 2012) The organization issues bonds at different intrigue rates and pitches them to general society Fundamentally, a firm that issues a security is acquiring the sum that the security offers for on the open market The significant sorts of bonds incorporate Treasury bonds and notes, issued by the government; civil bonds, issued by state and nearby governments; and corporate bonds, issued by partnerships Gallagher and Andrew (2003) provides that opposed to obtaining cash by issuing bonds, an enterprise may raise cash by offering offers of possession enthusiasm for the organization (Adusie, 2014) Those offers of proprietorship are stocks Financial specialists who purchase stock are called investors or investors As a supply of funds, stock has preference over bonds: the cash raised from the offer of stock doesn't ever need to be paid back and the organization doesn't need to make intrigue installments to the investors There are essentially two composes of stock: regular stock and favored stock (Ofori-Abebrese, et al., 2016) The holders of organization normal investors are the proprietors of the organization and they get an arrival on their venture as a profit while favored investors of an organization are alleged provided that the governing body of a business pronounces profits, they are the ones that are paid first, yet do typically don't get the chance to cast a ballot on the most proficient method to the firm is run (Gallagher & Andrew, 2003)

2.4.5 Mutual Funds

The Securities Industry Law of Ghana considers a mutual fund as a public or an external company that is set up exclusively to hold and oversee securities or other money related resources (Darkoh, 2006). The organization acknowledges assets from financial investors and utilizes those assets to purchase an arrangement of securities and other money related resources and hires an expert in fund management to oversee the investment. Ghana's mutual funds may either be open-ended or close-ended (Adusie, 2014). The open-ended funds have gained much popularity in Ghana. These funds are usually repurchased from the holder in any quantity and at any time. However, the close-ended funds are funds with a fixed number of shares to be repurchased from the holders (Ansah, 2015).

2.5 Performance of the Asset Classes

2.5.1 Mutual Funds

In prior studies, the measure of the performance of mutual funds have well been established. For instance, studies carried out by Jensen (1967), Sharpe (1964), Treynor (1965), among others, have brought about some measures of mutual funds such as the Sharpe ratio, Jensen's Alpha, and so on. The Jensen's Alpha measures the measures a manager's anticipating capacity that adds to the fund's return Jensen (1967). The Sharpe ratio is an essential risk performance measure to ascertain mutual fund performance in Ghana. The Sharpe ratio estimates how much a portfolio can yield a return in excess of the risk-free return to money, per unit of risk. Thus, estimated by subtracting the risk-free rate of return from the rate of return of an investment to get what is termed "excess return".

The Sharpe ratio can now be ascertained by dividing the excess return by the standard deviation of the return (Ansah, 2015). The Sharpe ratio does not rely upon the decision of a benchmark which is the market index. Jagric, Podobnik, Strasek, and Jagric (2007) studied Slovenian mutual funds and uncovered that every single investigated fund beat the market on a risk balanced premise and that funds were very much diversified. Prajapati and Patel (2012) examined performance evaluation of mutual fund plans of Indian organizations. Utilizing Sharpe Measure, the study found that the vast majority of the mutual funds have given positive return amid 2007 to 2011.

Qamruzzaman (2014) assessed the execution of 32 development arranged mutual funds based on month to month returns contrasted with benchmark returns. Risk Adjusted performance proposed by Sharpe was utilized. The Sharpe ratio (1966) was produced out of the Capital Asset Pricing model (CAPM). Before the Sharpe ratio, existed different theories, for example, the Expected utility theory, a theory of conduct gives a model on how financial specialists or speculators particularly risk unwilling financial specialists, settle on decisions among unsafe options when looked with vulnerability. The individual decision making under vulnerability is accomplished by expanding expected utility of end-of-period riches. This foundation can be substantial when people are rational, lean toward additional to less and pursue financial maxims of conduct of decision under vulnerability. It is exceptionally straightforward method for settling on decisions among mutually selective speculations having distinctive likelihood circulation of end-of-period settlements.

The State of Preference theory was the second imperative theory used to research speculation choices under vulnerability for a given arrangement of security costs. The idea of condition of nature is utilized to catch vulnerability in the economy. The investment decisions of firms and people are connected through free market activity for securities in the capital markets. In this manner firms pitch securities to bring funds to put up in genuine resources and these people that purchase those securities acquire claims against these benefits (Copeland, Weston, & Shastri, 1983). Markowitz (1952), likewise proposed the possibility of Modern Portfolio Theory and recommended that financial specialists ought to be adjusted for extra hazard and gave a system to estimating hazard. After the advancement of portfolio hypothesis and capital resource valuing model hazard was incorporated into the assessment procedure of securities

2.5.2 Real Estate

Real estate showcases in Africa are results of various financial administrations with incongruent qualities that decide their allure to neighborhood and worldwide financial specialists. Each showcase is accordingly extraordinary regarding improvement and development, and rather ends up in a local and worldwide rivalry. This paper looks to utilize results from decadent models for the private market in Ghana to inspect its appeal as a speculation vehicle. Further examination utilizing essential macroeconomic variables have additionally been embraced to show its commitment towards national advancement. Generally, private aggregate returns estimated in neighborhood money (Cedis) from 1992 to 2007 have kept running at annualized rate of 37.2% for each annum; comprised of a moderately steady wage return averaging 4.6% for each annum and exceedingly unstable capital development at an annualized rate of 32.4% for every annum. Estimated in US$, annualized add up to returns have been 14.6% for each annum, with capital development of 7.7% every year and normal salary return of 6.7% for every annum. Gross domestic product development and loan fees demonstrate a positive and negative connection separately with add up to returns. Linkages between the financial factors and ostensible rental esteem development, notwithstanding, stay feeble.

All the more shockingly, the normal associations with monetary development furthermore, loan costs seem considerably more grounded, with expanded relationship coefficients and more grounded factual hugeness, if the dollar designated performance measures are flattened by Ghanaian value swelling. The outcomes propose the drivers of dollar designated private costs are a perplexing procedure in an economy that has been presented to high household swelling and huge developments in trade rates. There is plainly a degree for further examination into the market elements of private costs under these conditions. The reason for this examination can be enhanced to decide the equalization of household versus abroad and ostracize financial specialists in the market.

2.5.3 Stocks

Research has it that it is quite difficult to predict the stock prices in majority of stock markets in Africa (Afful, 2015). Especially in the context of Ghana stock market and Africa stock market at vast. Some studies on the world's stock market holds that if to be sure the stock prices of firms recorded on their different market considers all promptly data inside the open area and anticipates that stock prices will reflect same then the stock cost will be suit in a flash all most recent data on stocks leaving all prior data on stock. On the off chance that this thought for the market effectiveness is exact then the semi solid type of productive market speculation revokes the investigation of the fundamentalist.in expansion, there have been an expanding number of concentrates into an organization's response to particular monetary and friends' factors and open data occasions, for example, profits declarations, stock parts and investigator proposals.

Concentrates that depend on occasion technique examine the modification in the market in order to give most recent data. Given that these are immediate trial of market productivity; they are joint speculation issue and thus build up productivity without making inclination to a resource estimating model. Numerous specialists have dived into how to give clear front to estimating and fathoming how productive and compelling the stock market of Africa. Among all the three levels of market productivity it is just the powerless shape that isn't been widely been inspected in that there is no satisfactory information to do as such. By and large the stock market in Africa is more inefficient. Jefferis and Okeahalam (1999) researched the South African stock market to evaluate how proficient the stock market is utilizing the unit root factual procedures. Their exploration considers found that they found that the South African stock markets are effective under the time of their exploration yet the main feedback with their examination think about was that the factual model utilized was not great to make derivations and inductions on the effectiveness of the market. Researchers like Jefferis and Okeahalam investigated completely the semi-solid type of showcase effectiveness of the stock market in Nigeria, Zimbabwe and Botswana. Their study concentrated on how the data declaration was consolidated into the assurance of the single stock firms and how these stock value data is reflected into the stock's prices. They found that the Nigerian stock markets to a bigger degree semi-solid yet Botswana, Zimbabwe are most certainly not. Different analysts like Magnusson and Wydick (2002) played out an auto-connection test to discover how stocks act in eight African stock markets. Using a halfway autocorrelation test, they found that except for Zimbabwe and Ghana, all alternate nations showed a frail shape showcase of the effective attributes.

Simons and Laryea (2004) explored four unique stocks from four distinct nations for the period traversing from1990 to 2003. Utilizing parametric test and non-parametric test. They found that except for South Africa, the stock market for others (Ghana, Egypt, Mauritius) were portrayed as stock markets that are feeble proficient. Jefferis and Smith (2005) inspected the sequential reliance in day by day stock files of four nations (Ghana, Mauritius, Egypt) for the periods traversing from1990 to 2001. They likewise found that their got outcomes did not give enough grounds in help of the feeble type of stock market barring their South Africa. Eight African stock market have revealed by Ntim et al (2012) to be wasteful. This stock market has a place with these nations; Ghana, Nigeria, Egypt, Kenya, Mauritius, Morocco, Botswana and Zimbabwe. This are so clear when a vigorous test is executed. Just as of late, McKerrow (2013) researched the stock market productivity of another five stock markets in Africa. These nations are Namibia, Ghana, Botswana, Cote d’Ivoire and Mauritius. The stock markets of nations like Namibia and Cote d'Ivoire did not dismiss the irregular walk theory. These outcomes show obviously that the exploration was direct and can't be depended on in testing markets been tried for productivity. In illiquid markets, speculators confront higher exchanging costs and have diminished motivating forces to create data about organizations. Financial analysts request higher return to adjust for these unwanted highlights and firms wind up with higher expenses of capital.

Critics of productive market theory expect that nonperforming advertise diminish liquidity stocks in the market. Performing markets can possibly adjust both the unpredictability of a stock's profits and the exchanging volume. One proportion of the effect of a market that is performing is normal more prominent exchanging volume. Volume emerges from liquidity exchanging, commotion exchanging and data exchanging. Commotion exchanging is certainly not an all around characterized class of exchanging. The individuals who have utilized the term appear to mean merchants with sub-par data who misinterpret the quality of the data they have and additionally exchange for nonpecuniary reasons.

Regardless of whether the refinement between clamor brokers and different merchants is important, a performing stock trade is probably not going to debilitate clamor brokers from exchanging. Clamor brokers who are specialized brokers are probably going to be supported by the accessibility of beforehand concealed data and the more noteworthy simplicity of entering and leaving the market. Commotion dealers who are exchanging on fundamentals confront bring down expenses of following up on their desires. Data brokers try to profit by producing private data and exchanging on it. They like to exchange expansive and unknown markets. The expanded support of liquidity what's more, clamor brokers energizes more noteworthy cooperation of data brokers. There is likewise motivation to expect that the sums and kinds of private data produced by data brokers will change if the trade is performing. As a more extensive market in which to exchange and realize restores, a performing market is probably going to pull in a more prominent measure of data exchanging and give a motivation for merchants to put more noteworthy assets in creating private data.

2.5.4 Bonds

With respect to the performance of the bonds advertise in Ghana, it is indicated that the bonds market in Ghana has had a moderately decent performance over the past a long time In any case, the bonds issued by government in the bonds market overpowers the private corporate bonds issued in the bonds market This might be because of hesitance with respect to organizations to raise capital through the bonds market Once more, the reason might be that government bond securities tend to be without risk and offer higher returns when contrasted with corporate securities This has lessened public and corporate interest for privately owned businesses' securities ISSER (2013) has it that more government bonds were recorded in 2011 than 2012 Recorded government bond in 2012 were proportionate to GH¢5,939.13 million ($3, 299.52 million) There was no corporate security recorded amid 2012

The Graphic Business in 2013 revealed that as per the Ministry of Finance and Economic Arranging of Ghana, the administration of Ghana in January 10, 2013 issued a bond which recorded inflows to the tune of GH¢2.2 billion ($1.12 billion), converting into 450% oversubscription The government in any case, acknowledged GH¢402 million ($204.1 million) at a coupon rate of 16.73% It additionally includes that around 99% of the offers came from foreign investors and the rest of the 1% from firms and establishments, commercial banks and people inside the nation In July 2012, the administration issued a medium-term bond which was oversubscribed at GH¢775.14 million ($430.63 million), qualifying the administration for acknowledge GH¢534.16 million ($296.76 million) The over membership of administration of Ghana obligation instruments demonstrates the certainty remote financial specialists have in the Ghanaian economy

2.6 Associated Risks to Asset Class

The literature documents varying risks associated with the various class of assets under study. In this section the researcher considers these risks into details as relevant to the study. The following risks are associated with the various classes of assets;

I. Market Risk

This sort of risk is the unpredictability in the costs of securities because of changes in the financial market Due to uncertainties in the financial market, the various classes of assets are faced with the market risk For example, investors of EPACK and HFC Equity trust made a great deal of misfortunes amid 2008 and 2009 on account of the impact of the credit crunch and the bearish nature of the Ghanaian capital market The EPACK and HFC Equity trust have a higher distribution in the capital market and that reflected in the execution of the reserve Aggregate speculation plans have less risk and more prominent return than the treasury bills

II. Macroeconomic Instability

Macroeconomic instability has an adverse effect on the asset classes. When the economic management is poor, it can have a negative impact on the performance as well as the value of these asset classes (Ansah, 2015).

III. Inflation Risk

This is the risk associated with changes in the inflation rate of the economy. This risk also poses a threat to the asset classes due to the uncertainties in making informed decisions. According to Ansah (2015), inflation risk is the risk that the value of an investment into the asset classes will be affected as inflation rates change.

IV. Liquidity Risk

This is the risk that an investor will not be able to buy or sell an investment quickly because buying and selling opportunities are limited (Ansah, 2015).

V. Currency Risk

Currency risk is the risk that an investment transacted in a foreign currency will lose value due to fluctuations in the rate of exchange

VI. Political Risk

This is also the risk that a foreign investment will lose value due to unfavourable political or regulatory changes in that country

2.7 Comparative Analysis of the Classes of Assets

Treasury bills have very low risks contrasted with other risky assets such as bonds, stocks, mutual funds, etc. By law, investors can put resources into just certain good performing investments issued by the government, partnerships, state and nearby governments. Verifiably the return on treasury bills have been lower than for either bond or stock funds or even mutual funds Because there are a wide range of sorts of bonds, bond funds can differ drastically in their dangers and prizes In spite of the fact that a stock fund's esteem can rise and fall rapidly (and drastically) over the here and now, truly stocks perform preferred over the long haul over different kinds of ventures including corporate bonds, government bonds, and treasury securities.

By and large market risk represents the best potential peril for speculators in stocks funds Stock costs can change for various reasons, for example, the general quality of the economy or interest for specific items or administrations Not every stock fund is the equivalent For instance, Growth funds center on stocks that may not pay a customary profit but rather have the potential for substantial capital additions and Income funds put resources into stocks that compensation consistent profits (Investment Company Institute, 1999 pg. 3).

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter discusses the research methodological approach employed by the researcher in order to aid the achievement of the objectives of the study. The chapter considers the research design, research framework, target population and the sample size. To add to the above, the chapter further describes the data sources, method of data collection and analysis.

3.2 Population

A population of all corporate institutions listed on the Stock Exchange market of Ghana, all Mutual funds and all the Government of Ghana bonds for a period of a decade. The Ghana stock exchange is the principal stock exchange in Ghana with its incorporation in July 1989 and commencing trading in 1990. It currently lists 42 equities and 2 corporate bonds in Ghana as at now. Mutual fund considers an investment vehicle made up of a pool of funds collected from many investors for the purpose of investing in securities. Currently, there exist a total of 29 Mutual fund companies in Ghana.

In addition, the regulatory body of the financial sector as well as the government's bank, the Central bank of Ghana. The Bank of Ghana provides an advisory role to the government. Therefore, the study makes use of all bonds of governance for the past decade as obtained from the Bank of Ghana.

3.3 Sampling procedure and sample size

In choosing the sample for the study, the research focused on a sample size of the listed prices of mutual funds from Data bank for a 10year period, the stocks also look at 5 randomly selected stock prices till date from all sectors of the Stock market. Finally, the study also considers the government of Ghana bonds within the past decade. This sample was based on the literature and to ensure that the sample was representative enough to draw conclusion

The main data used for this study are from secondary sources Secondary data in the form of published integrated reports on the company's documents will also be gathered for the study The secondary data in collecting information for the study will be sourced from the Bank of Ghana and the Ghana Stock Exchange The sources of the secondary data collected include records of stocks from the Stock exchange market and government bonds from the central bank of Ghana over the years This helped to identify, defined and measured the trend and performance of key concepts, the data sources that of others used and this helped to discover how this research project is related to other studies

3.4 Research Design and Approach

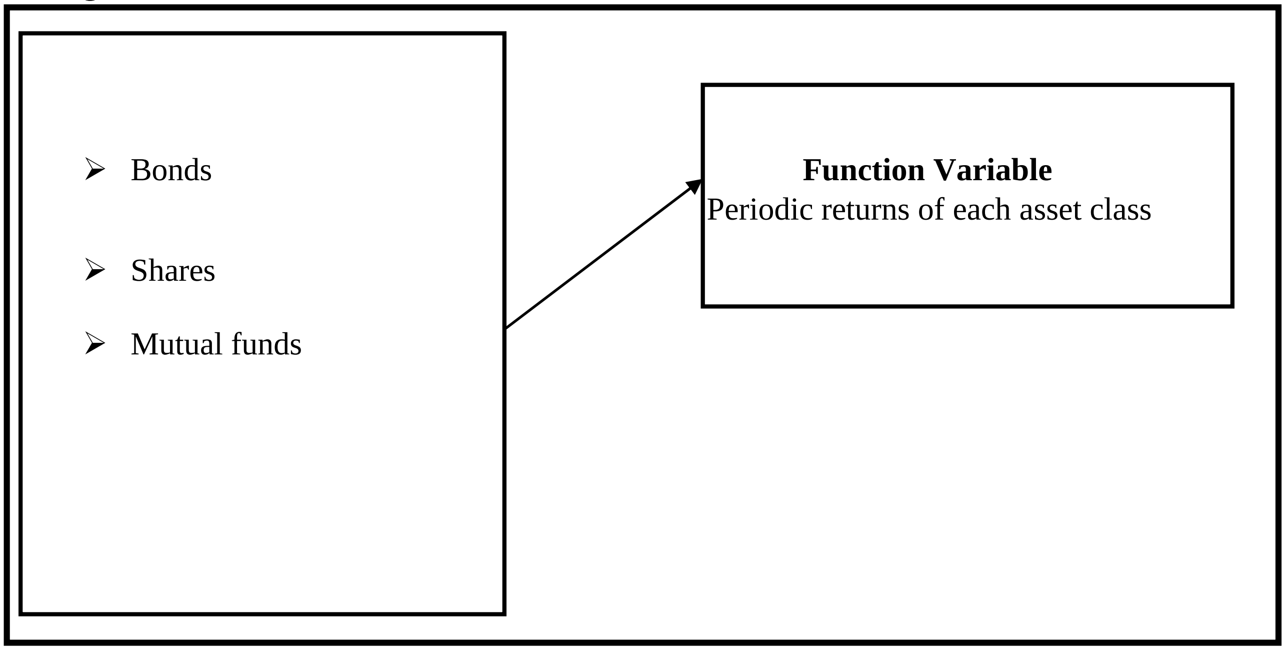
To achieve the purpose of this study the cross-sectional survey design will be adopted. This will help the researcher to gather data from variables at a specific given time frame since the study will be conducted within a period of time (Sedgwick, 2015). The study employs mainly the mixed methodological approach. The mixed method approach comprising of qualitative and quantitative approach. This type of method is mostly used to gain an understanding and provides insight into the problem under investigation or helps to develop ideas or hypotheses for potential quantitative and qualitative research It is also used to uncover trends in thought and opinions, and dive deeper into the problem

This is to aid the researcher to provide a trend analysis on the context of the study to aid the researcher arrive at a reasonable conclusion. With this method the researcher blends the qualitative and quantitative methodological approach to aid the analysis and presentation of data on the performance and risk associated to the assets on the financial market.

3.5 Research Framework

GARCH models are widely used in financial series because they are able to capture volatility dynamics of data To test the stock, bonds and mutual fund yield anomalies we chose GARCH (1,1) model with distribution of errors We base this model on past empirical results of other researchers such as Berument and Kiymaz (2001); Choudry (2001) or stylized facts and statistical issues of Cont (2001). GARCH (1,1) should correct, at least partially, stock, bonds and mutual funds returns for volatility clustering and count on non-normal error distribution containing heavy tails (Cont, 2001) Yet, there exist other properties of these asset returns, which are hard to be captured However, it is out of scope of this text to examine all statistical issues of asset returns For testing of these three major anomalies we used the GARCH (1,1) model The framework is presented diagrammatically below;

Diagram 3.1 Research Framework



Author design (2019)

3.6 Econometric model

The study bases this model on past empirical results of other researchers such as Berument and Kiymaz (2001); Choudry (2001) or stylized facts and statistical issues of Cont (2001) Therefore, to present the risk and reward orientations of the various asset class, the researcher outlines this model below

$$X_t = \sigma_t \varepsilon_t \, , \varepsilon_t \sim N(0,1)$$

$$\sigma^2 = w + \alpha X_{t-1}^2 + \beta \sigma_{t-1}^2$$

$$w > 0, \ \alpha \geq 0, \ \beta \geq 0$$

where, β = beta is the coefficient of the risk variables, α = alpha is the coefficient of the return

ε_t is normally distributed with mean 0 and variance 1, W = time effect variable, X= return, σ = risk.

3.7 Validity and Reliability of data

Data used in the analysis of this study was obtained from very reliable sources, mainly the Ghana Stock Exchange for data on shares listed on the Exchange, Bank of Ghana website for the government of Ghana bonds over time and Databank corporate websites for the financial data on mutual funds. Financial data used in this study have been audited and also have the backing of financial analysts who are professionals and recognized on both national and international scenes. This will give other researchers a decent chance to play out this study and end up with similar outcomes.

3.8 Data handling

According to Creswell (2012) analyzing data in research consists of preparing and organizing the data for analysis. In other words, the questionnaires were coded for analysis. The collected data were statistically analyzed, using the Statistical Package for Social Sciences software (SPSS) Representations like tables and charts were used to ensure easy and quick interpretation of data Responses were expressed in percentages Data from the completed questionnaire were checked for consistency The items were grouped based on the responses given by the respondents and were coded for easy usage of the Statistical Package for Social Sciences (SPSS) This method was used because it is the best instrument to identify, compare, describe and reach a conclusion

This research made use of the thematic analysis, following a logical step by step approach to analysis using the approach of Miles and Huberman (1994) Thematic analysis was performed by the researcher to aid in the process of developing categories of concepts Thematic analysis was conducted for the purpose of ascertaining themes rising from the data collected from the various secondary sources (Robson, 2002) After the first data was analyzed, the developed categories underlying the analysis of further cases was noted in order to increase comparability across the interview transcripts (Flick, 2002).

Thematic analysis is a widely used approach in this study (Rouslston, 2001) and has several benefits including flexibility (Braun & Clarke, 2006). According to Silverman (2011) for thematic analysis to be effective, the researchers must familiarize themselves with the dataset by taking note of initial comments and ideas. Afterwards, initial codes should be generated for the entire dataset. Themes should then be searched for by grouping similar codes into potential themes. The themes should then be reviewed to check for relationship with the dataset and finally themes should be refined to verify linkages between them (Silverman, 2011).

A theme captures something important about the data in relation to the research question and represents some level of patterned response or meaning within the data set (Braun & Clarke, 2006). It is important to note that within data, themes can be identified in one or two main way: inductive and theoretical According to Creswell (2007), with inductive analysis, researchers work back and forth between the themes and database until they establish a comprehensive set of themes Theoretical thematic analysis on the other hand tends to be driven by the researcher's theoretical or analytic interest in the area and is thus more explicitly analyst-driven This form of thematic analysis tends to provide less a rich description of the data (Braun & Clarke, 2006).

3.9 Data Analysis and Presentation

Trends of stocks and bonds on the financial market would be analyzed under themes. Thematic analysis is one of the most common forms of analysis in research which emphasizes on pinpointing, examining and recording patterns (or "themes") within data (Guest, 2012). Themes are patterns across data sets that are important to the description of a phenomenon and are associated to a specific research question, thus the themes become the categories for analysis (Braun & Clarke, 2006). The data gathered from the stock and bond market and result obtained from running the trend analysis will be presented using descriptive statistics such as tables, graphs and charts.

The collected data will be statistically analyzed, using the Statistical Package for Social Sciences software (SPSS). Representations like graphs and charts will be used to ensure easy and quick interpretation of data. Data that would be collected will be expressed in percentages. The data will be grouped based on the trend, risk and performance and will be coded for easy usage of the Statistical Package for Social Sciences (SPSS) software. This method was used because it is the best instrument to identify, compare, describe and reach a conclusion.

3.10 Technical Analysis

In order to select financial instruments whether it is for a short period or long, it is important to understand what type of investments one is looking for and to be able to understand what the risks verses rewards are as well as the workings of that investment In order to do that an in-depth analysis of the instrument is required Based on this analysis it is then possible to predict to a certain extent the future direction of the price (Palicka, 2012)

Technical analysis is a method to forecast the direction of prices based on the analysis and study of past market data This mostly includes price and volume Analysts use charts and look for patterns on the price line; these patterns include resistant lines, head and shoulders etc., Technical analysis also includes studying technical indicators such as moving averages, flags and balance days etc., (Technical Analysis 2014, Kirkpatric & Dahlquist, 2011 and Palicka, 2012) Basically, all the analysis is done on previous movements of the price and current price which are converted into indicators and patterns from which the future price is projected Technical analysis is used among traders and financial professionals, especially day traders who execute a lot of different trades daily and close out their positions by the end of the day

However not everyone agrees to the validity of technical analysis and is wildly dismissed by a lot of professional investors who are long term investors and value stock based on the health and potential growth of a company, due to the fact that there is no conclusive evidence to their validity (Technical Analysis, 2014) Technical analysis is based on the theory that the market price reflects all the information related to that security Therefore, an analyst looks at the past performance assuming that the price behavior will repeat itself (Technical Analysis 2014, Kirkpatric & Dahlquist, 2011 and Palicka, 2012).

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF RESULTS

4.1 Introduction

This chapter details discussions, analysis and data as gathered from the study on the topic "A comparative analysis of the performance of various financial asset classes over the past decade: a case study of Ghana". Information for the study was derived from data collected from the websites of the stock exchange market, the Bank of Ghana and the Data bank mutual fund.

The study adopted a trend and technical analysis to forecast the direction of prices based on the analysis and study of past market data. A technical analysis framework was therefore developed for all categories of data obtained for the study.

Results of the data gathered for the study were analyzed using simple charts, tables and graphs. The findings of the study are analyzed under the following headings;

I. The performance of the various classes of asset such as stocks, bonds and mutual funds in Ghana.

II. The risk associated to these various classes of assets (stocks, bonds and mutual funds) in Ghana

III. A comparative analysis of the classes of assets (stocks, bonds and mutual funds over the past decade in Ghana.

4.2 Variable Statistics

This section provides the statistics of the variables used for the study. Detailed information of the Ghana stock indexes, bond and mutual fund are included in the study. The increased member count is considered in trading volume. The indexes are selected according to the price and volume data availability. The ticker names are used in retrieving data from the various websites. The study considers the stock market prices over a period of 1999-2013, bond prices by the government of Ghana over a period of 2009-2019 and mutual funds from Data ban, SAS fortune fund, Kiddifund, Campus fund and Christian Community fund with a given period of 1999-2017, 2001-2014, 2012-2014, 2007-2011 and 2010-2014 respectively. All indexes are in the Ghanaian currency (cedi).

Table 4.1: Variable Statistics of data

Ticker	Name	Country	Year	Currency
ARG-GES indexes	Stock market prices	Ghana	1999-2013	Cedi
ARG-Bond indexes	Bond prices	Ghana	2009-2019	Cedi
ARG-Mfund indexes	Data bank Mfund	Ghana	1999-2019	cedi
	SAS fortune fund	Ghana	2004-2014	Cedi
	Kiddifund	Ghana	2012-2014	Cedi
	Campus fund	Ghana	2007-2019	Cedi
	Christian Community fund	Ghana	2010-2014	Cedi

Source: Authors own construct 2019.

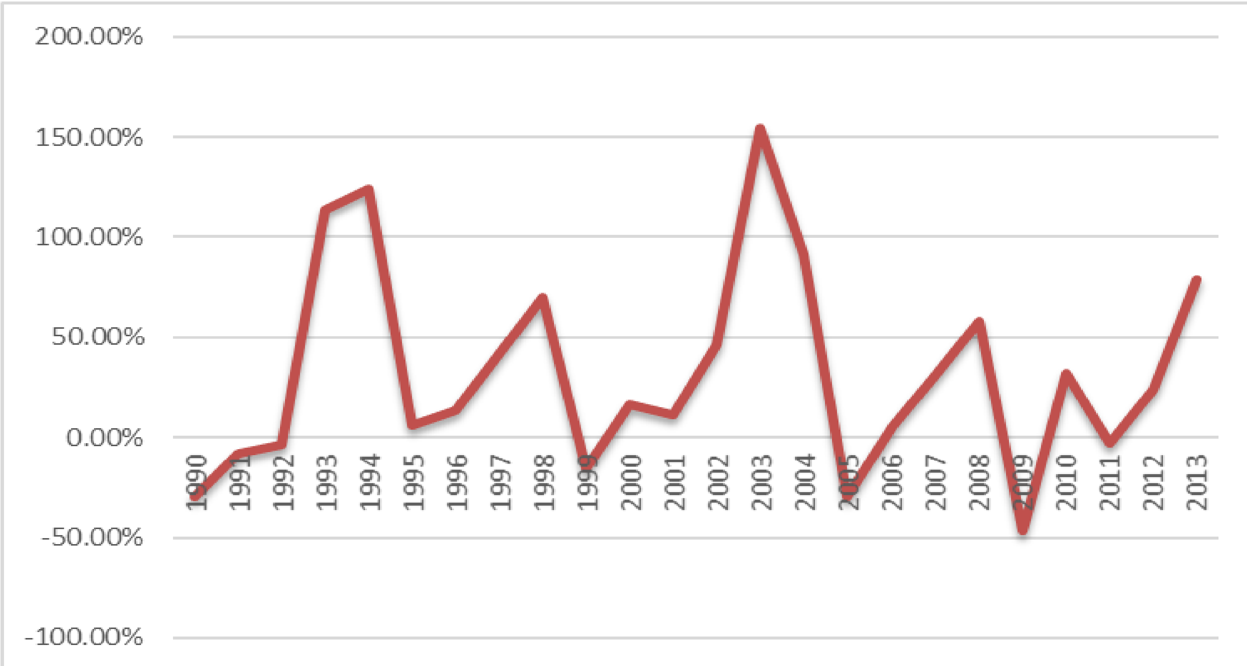
4.3 Analysis of the stock market

In assessing the performance of the various assets in Ghana, the study first considers the stocks traded on the Ghana stock exchange for a period of 24 years. The figure 4.1 below represents the average stock returns with their respective years for the period of 1990 to 2013.

In the figure 4.1 below, the study presents that in the initial stages of incorporation the stock market witnessed a negative return on stock prices, that is in 1990-1992 with a -30% return in 1990, -8% in 1991 and -4% in 1992. Again, in the year 1999, 2005, 2009 and 2011 returns also dropped into the negative zone with an average return of -15%, -30%, -47% and -3% respectively with 2009 experiencing the highest drop in returns.

Apart from these years, the stock market has experienced an enormous return on stock over the years with 2003 being the highest of all returns with 155% followed closely by 1994 1nd 1993 with a percentage return of 124% and 114% respectively. Additionally, the least positive return on the stock market over the years has been 2006 with a percentage return of 5%. This is followed closely by the year 1995 with a return of 6% per annum. Other lower returns in the exchange market was in the year 2001, 1996 and 2000 with an individual annual percentage return of 11%, 14% and 17% respectively.

Figure 4.1: The Ghana Stock Exchange returns from 1990-2013

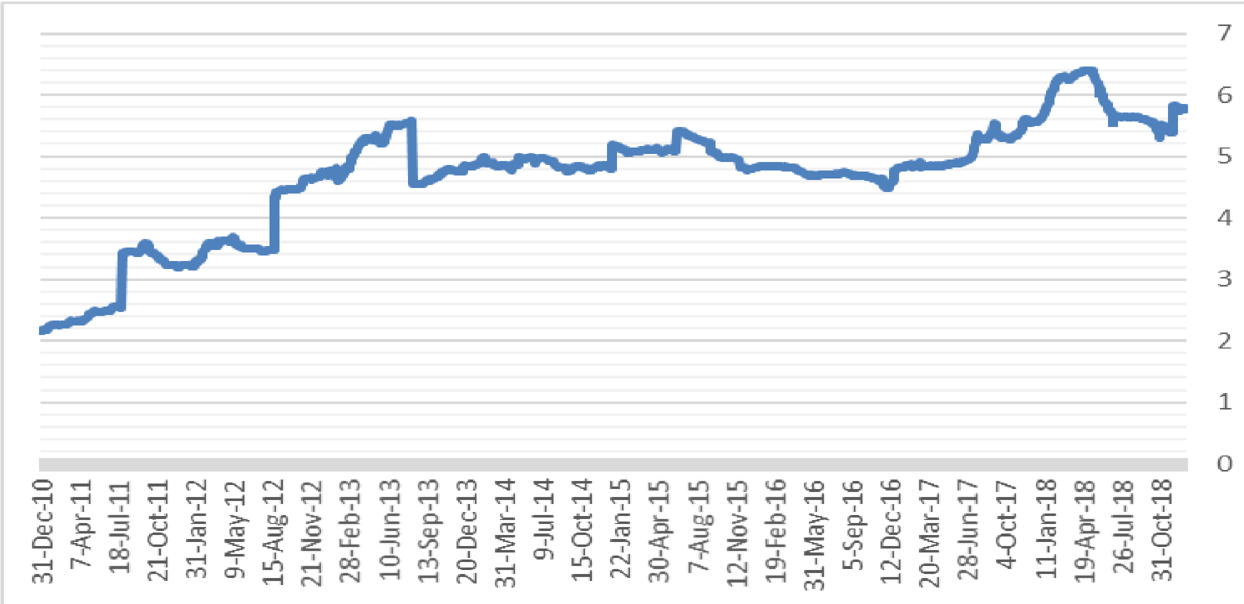


Source: Author's computations (2019). *All red bars represent a negative return and all the green bars also represents a positive stock return****.***

The average daily returns on stocks on the Ghana Stock exchange market is performing well. This is illustrated in the figure 2 below. From the figure the stock return consistently on average has seen a linear rise over the years from January 2010 to February 2019.

Although, there exist a slight volatility in the average return of the stocks over the period. The return on these stocks has shown an overwhelming increase on the stock market. This could be attributable to adequate regulatory framework of the stock market.

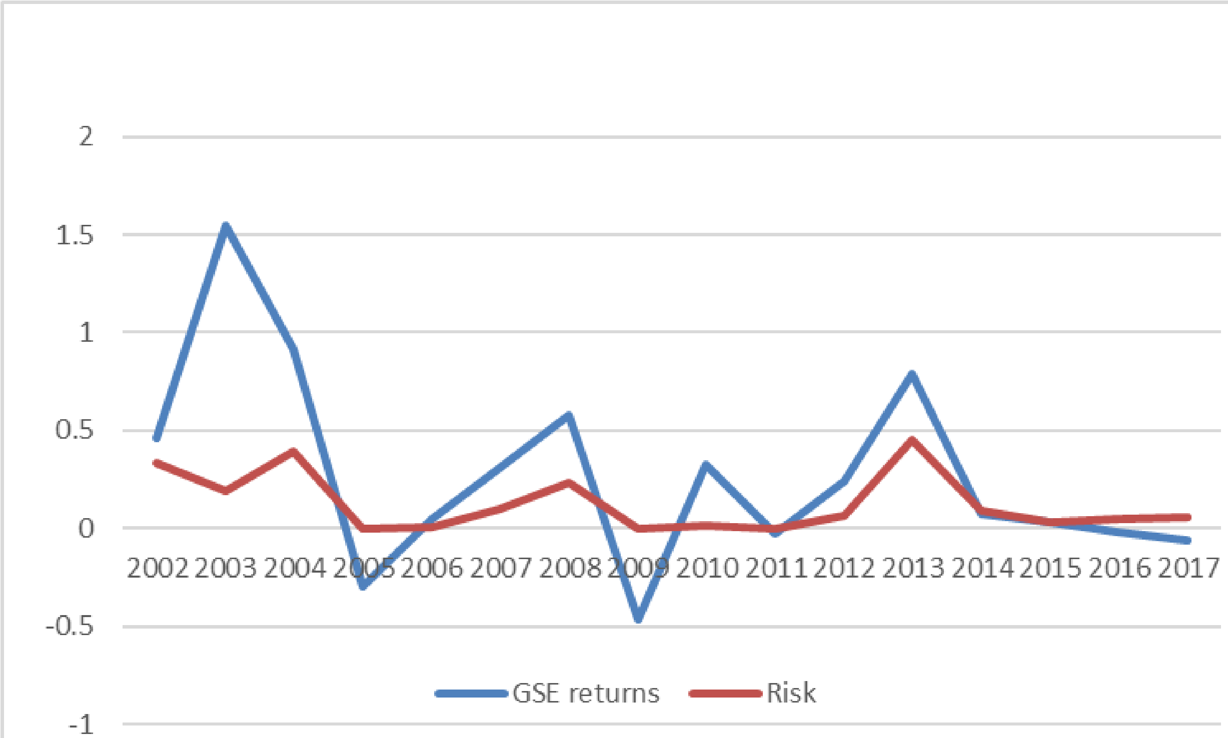
Figure 2: Daily returns on stock for the period of 2010-2019



Source: Author's computations (2019).

Further, the study shows the risk return trade off in table 3. From table 3 the study reveals that investors with the anticipation of higher risk would seek for returns equivalent or much higher than the risk. This is evident in the diagram in table 3 as the study show the various return with their corresponding risk orientation. In the table, negative returns have lower risk as compared to return of higher positive nature.

Figure 3: Representation of stocks risk-return trade off



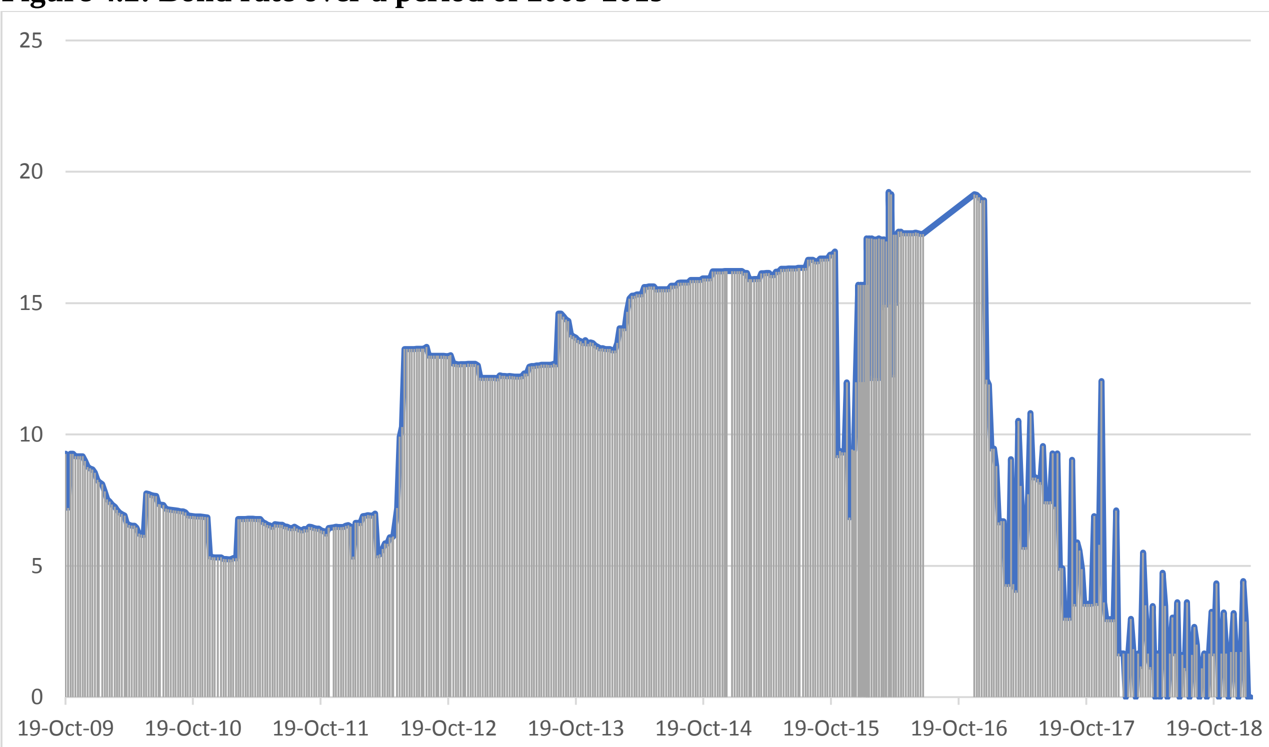
Source: Author's computations (2019).

4.4 Analysis of the Bond market

This section considers the assessment of the bond market rates overtime within a given period. The figure 4.2 shows the Ghana market for bonds for a period of 2009-2019. As per the figure 4.2 below, the bond market has improved since the first trading of Ghana Stock Exchange (GSE) commemorative registered stock in 1990 These bonds were five-year debt instruments issued to provide a foundation for active bond trading on the newly created GSE

Consequently, the diagrammatic representation shows a linear increase in bond rate over a period from 2009 to 2016. This is with an average percentage rate of 14.5% for the period. Additionally, this is also complemented with an average bong yield of 5years. Further, after the year 2016, the bond rate shows a rather decreasing in rate from the 19% to 4%. From the graph below, it can be observed that there was a steady rise in bond performance between 2009 and 2016; however, there was a sharp decline in bond performance towards the last quarter of 2016 till the end of 2018. This was mainly due to broad governance strategies of the separate governments in each period mentioned above and other macroeconomic factors like inflation, performance of the Ghana Stock Exchange and other general economic conditions.

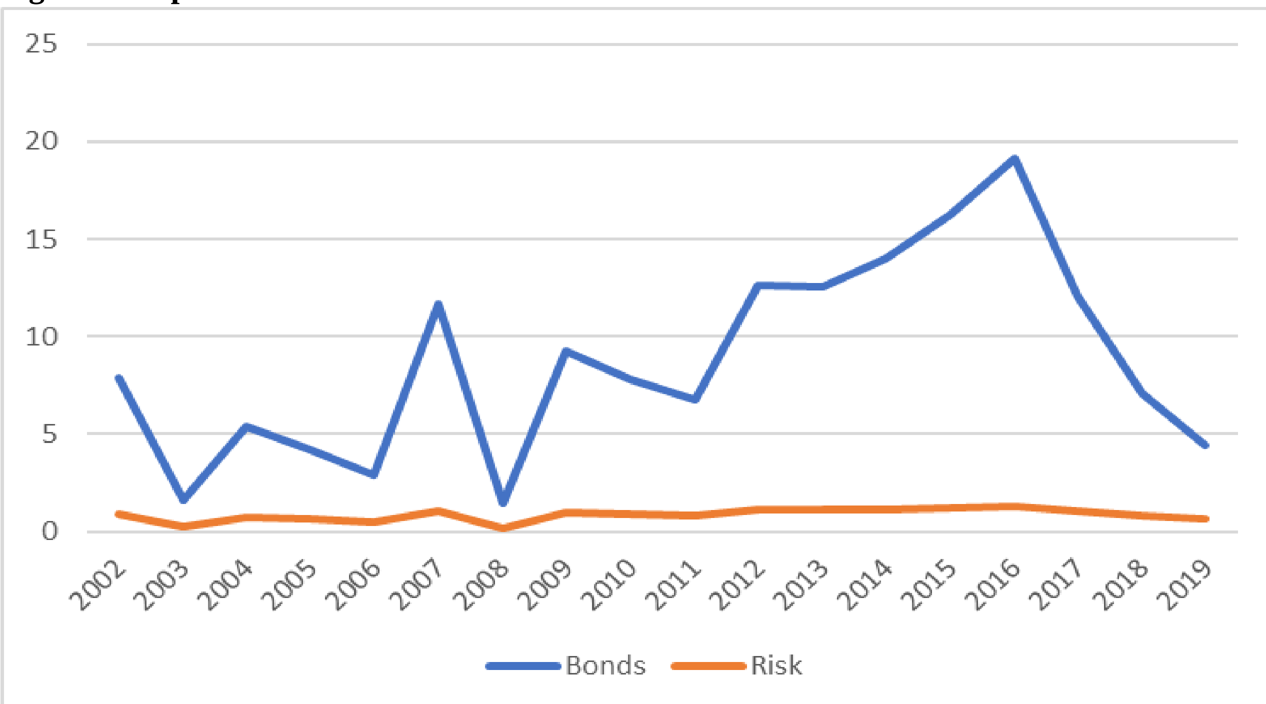
Figure 4.2: Bond rate over a period of 2009-2019



Source: Author's computations (2019).

The risk and return tradeoff of Bonds in Ghana are represented in the figure 4 below. From the table although bonds promise to pay higher returns the risk orientation seems to be relatively low. This is simply because government of Ghana bonds are risk free.

Figure 4: Representation of Bond risk-return tradeoff



Source: Author's computations (2019).

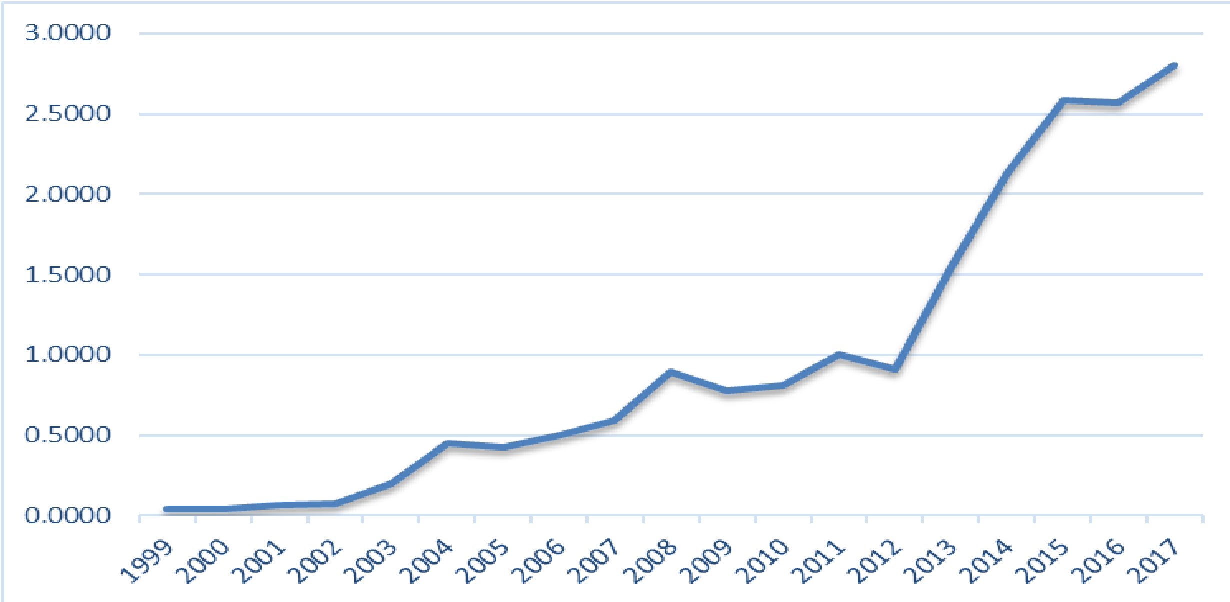
4.5 Analysis of the Mutual Fund Market

This section provides the various periodic fund values of five (5) major mutual funds traded in Ghana. These comprise the Databank Mfund, the SAS Mfund, the Kiddiefund, the Campus Mfund and the Christain Community Mfund. These funds traded in Ghana are analyzed below base on their individual asset market values, returns and yield to maturity within a given period.

The Databank Money market fund which is the first of all mutual funds to be traded in Ghana provides a low risk exposure to individual and corporate investors. The fund has seen an annualized growth in yield from 18.77%-19.62% from 2004 to 2017, with 2009 having the highest annual yield in investors returns of 28.06% having a sharp linear rise of 10% from 2008 of 18.00%. This market is also faced with uncertainty of returns as the annualized yield turns to be volatile due to economic and environmental uncertainties.

From figure 4.3 which represents databank fund over the period of 1999-2019 with the various monthly values and yield to maturity. It could be identified that although the fund consistently obtains a positive value on monthly value the yield on price adversely continues to be volatile with some years attaining a negative return in the value (consider 2005, 2010, 2012). Further, the period of 2003 and 2004 provided the highest yield of close to about 1.5 value in price of the fund.

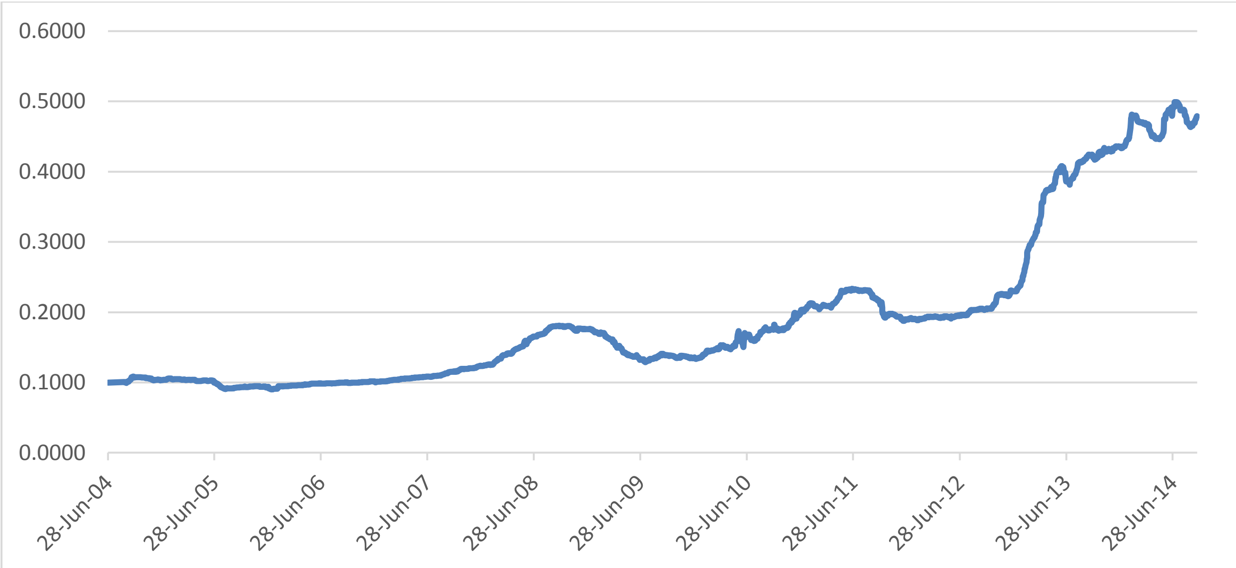
Figure 4.3: Databank fund over the period of 1999-2019



Source: Author's computations (2019).

Additionally, figure 4.4 shows the trend of SAS fund over a period of 2004-2014. The trend makes use the various monthly values of the fund and the period over time. From the figure 4.4 SAS fund values seem to be doing quite well from the period initiation to 2014. On average the figure highlights a significant rise in investor fund values. Prior to 2007, the values of SAS fund had a slight constant growth rate with an average value of 0.1. Within the period 2007 to 2014, the fund saw a sharp increase in the values, which is from 0.1-0.5. This suggest that as the price increase the value of investor funds also increases making it favorable for investors of SAS fund to gain more in returns.

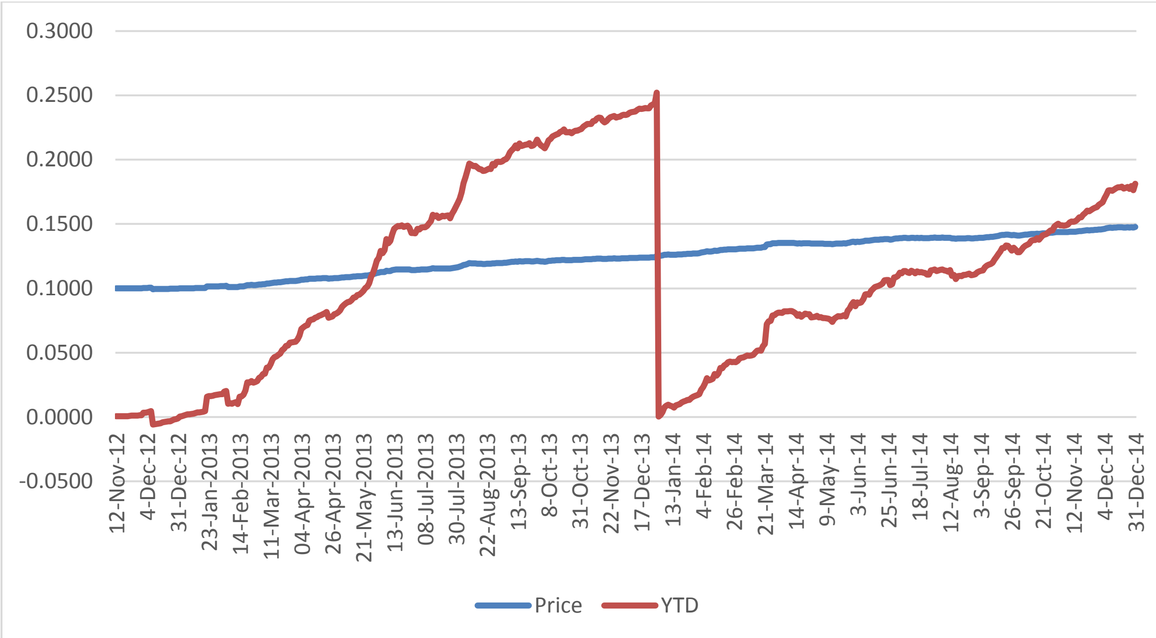
Figure 4.4: SAS fund over the period of 2004-2014



Source: Author's computations (2019).

Further, the study presents another mutual fund as traded in Ghana. This is the Kiddiefund overran observation period of 3 years with 2012-2014. Figure 4.5 presents the diagrammatic representation of Kiddiefund traded in the money market of Ghana. The diagram, figure 4.5 comprise the periodic values and respective yield on the fund for the given years from 2012-2014. The study shows a monthly representation of the performance in price of Kiddiefund. With this it was realized that the price has a moderate increase over time within the period of 2012 to 2014 with a corresponding sharp and swift increase in the yield to maturity from 0.01 to 0.2 from November 2012 to November 2013. Unfortunately, the fund showed a significant drop for a two-month period from 0.2 to 0.00 from November 2013 to January 2014 before gaining momentum to rise again in February 2014 and thereafter.

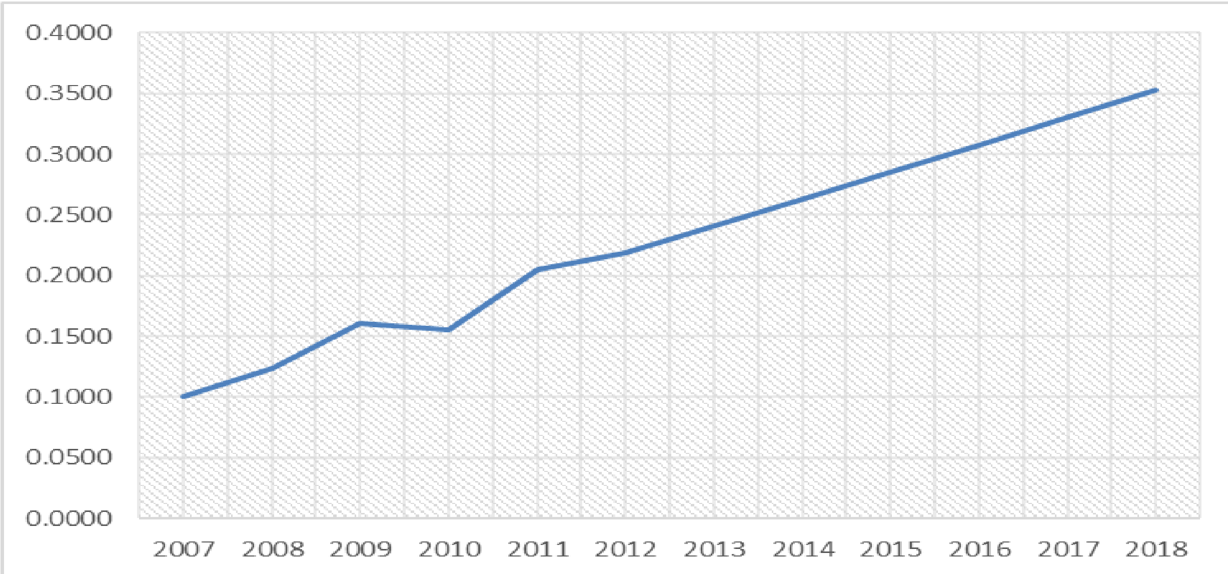
Figure 4.5: Kiddifund over the period of 2012-2014



Source: Author's computations (2019).

More so, campus fund showed an all new trend in statistic for the observation period of 2001 to 2019 understudy. The figure 4.6 shows the observation study period of campus fund traded in Ghana over the period of 2001-2019. It could be seen from the figure 4.6 that the monthly fund unit price is normalized over the period understudy of an average rate of 0.11 with October 2009 given a highest abnormal rise in price with the rate of 10.00. This suggest an outlier in the unit price monthly data obtained for the study.

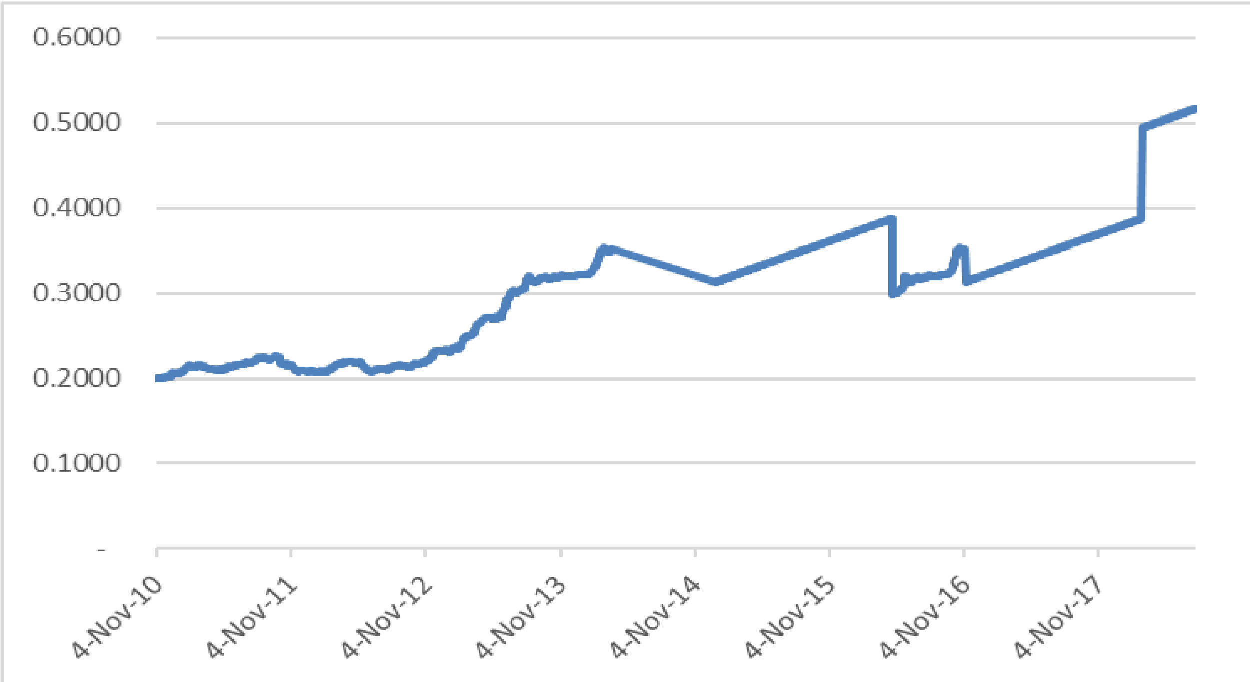
Figure 4.6: Campus fund for the period of 2001-2019



Source: Author's computations (2019).

Finally, the last fund on the list of the ARG-Mfund indexes is the Christian Community fund. The figure 4.7 shows the annualized observation data period of Christian Community fund traded in Ghana over a twelve-year (12) period from 2007-2018. The figure 4.7 show a gradual increase in the value of Christian Community fund over the period signifying an increasing rate in price. This is good news to investors as they could gain a consistent increase in return with the prevailing market rate.

Figure 4.7: Christian Community fund for the period 2010-2018



Source: Author's computations (2019).

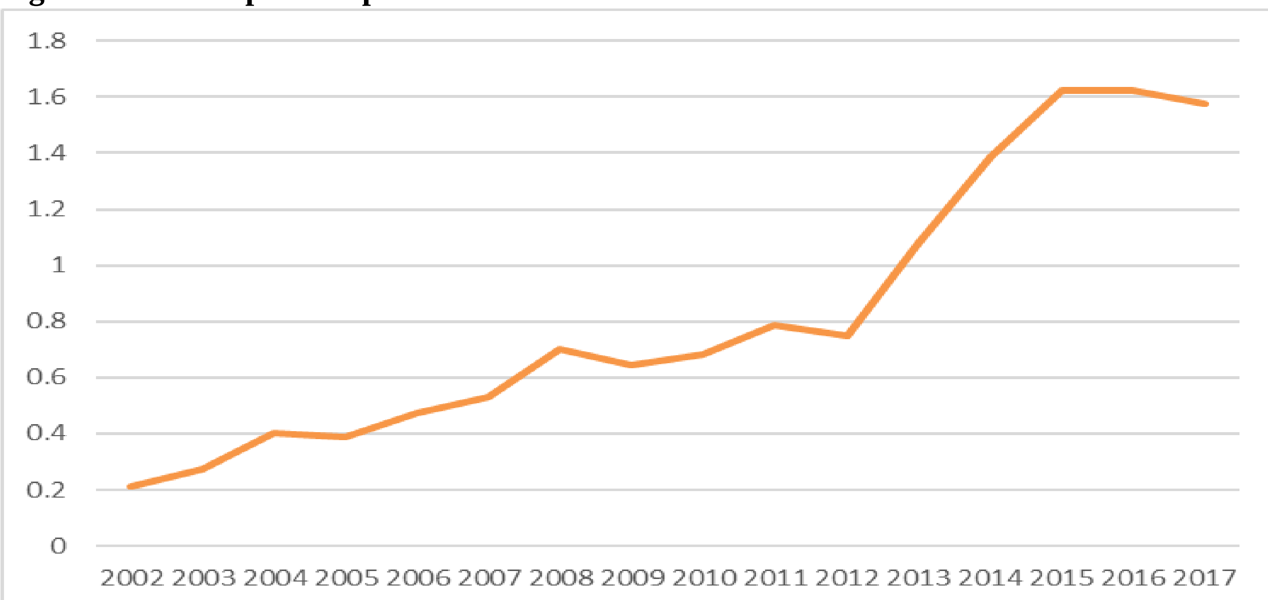
4.6 Composite analysis of Mfunds in Ghana

Comprehensively, the study represents a comprehensive analysis of the performance of the mutual fund market in Ghana. This was arrived through the average prices of all mutual funds within a given year from the period of 2002- 2017. This was done to provide a clearer view of how well the mutual fund is cumulatively performing on the Ghanaian asset market. The figure 4.9 shows a graphical representation of general performance of Mfunds in Ghana.

Given the figure 4.9 below, it represents that since 2002 till 2017 the Mfunds market performance has been encouraging. Although, it shows an inconsistency in the rise of Mfund, the year 2012 to 2015 shows a sharp rise of approximately an average market price of 0.7 to 1.6 within the period.

This could result from an economic condition of increasing inflation rate during the period, hence, many investors were incentivized with high rate of returns on their investment through the Mfund market with a corresponding increase in the price of the fund. Furthermore, the Mutual Fund market in Ghana became vibrant only recently due to growing financial literacy amongst Ghanaians, sophisticated fund management software and improved regulations.

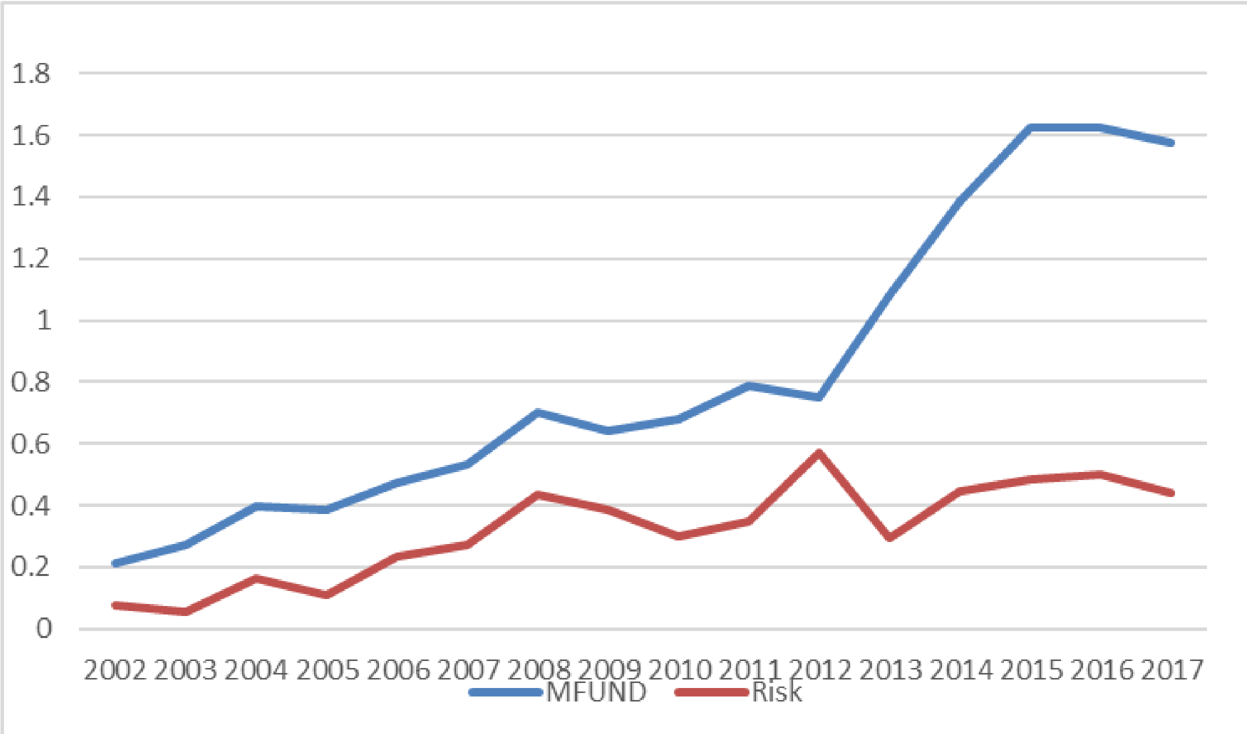
Figure 4.9: A composite representation of Mfunds



Source: Authors computations 2019

Further, the study shows the Mfund risk return tradeoff in table 5. From table 5 the study reveals that investors with the anticipation of higher risk would seek for returns equivalent or much higher than the risk. This is evident in the diagram in table 5 as the study show the various return with their corresponding risk orientation. In the table, negative returns have lower risk as compared to return of higher positive nature.

Figure 5: Representation of Mfund risk-return tradeoff



Source: Authors computations 2019

4.7 A comparative analysis of the various assets

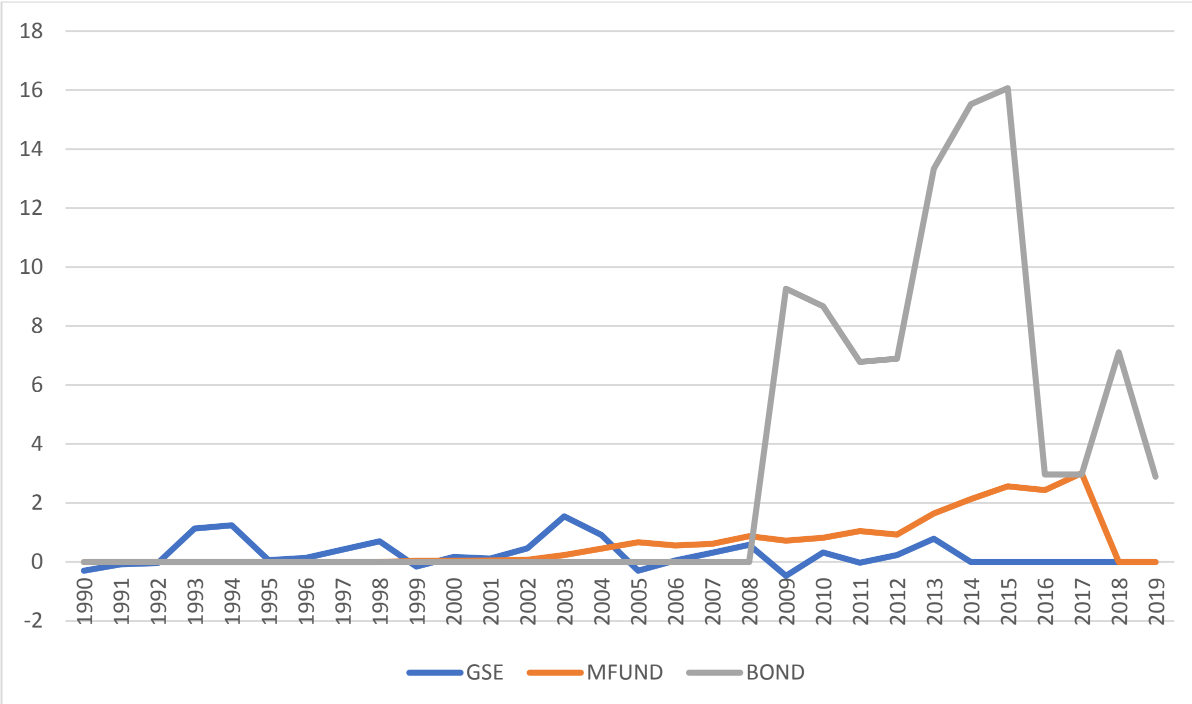
The asset classes understudy in this research includes the stocks traded on the Ghana stock exchange, the government of Ghana traded bonds and the money market mutual funds. This section sought to provide a detailed comparative analysis on these three broad categories of asset classes in Ghana. All these varying asset classes traded in Ghana are investment vehicles that drive higher returns with associated risk as well.

In Ghana, shares represent a stake in the ownership of a particular company. This means that if that particular company grows the individual return in the stake of the company also increase with a corresponding increase in risk. This is because as individual expectation for returns increases, the risk exposure associate with the share also increases.

Ghana's bonds market are alternative methodologies for companies and institutions to raise capital for their operations. Bond establishes debt investment. Investors loan money for a set period of time at a fixed interest rate. The wholesome investment is recouped at the end of the set time period. Unlike shares, bonds provide a safer investment.

The MFUND market in Ghana if a funds bundles of stocks. These funds provide variety of benefits to investors as compared to bond and share because it can be diversified. Mutual funds are chosen by individual investors as it combines both stock and bound in the market to provide some level of flexibility to the investor.

Figure 4. 9: A representation of Stocks, Mfunds and bonds



Source: Author's computations (2019).

In figure 4.8 the study shows a comparative diagrammatic representation of the various asset classes in Ghana. Of all the three asset class bonds in Ghana is considered as the safest of all investment packages with a less risk orientation. This is evident as the bond curve is high above all other asset class in Ghana. This is followed closely by the Mfund as is a blend of both stocks and bond and could easily be diversifiable to suit the interest of the investor. The riskiest of all the class of asset is the stock traded on the exchange market.

As investment vehicle provides means of investing capital with the aim of growing it, it should be considered that investors who take more risk take it with a high expectation of more returns.

Therefore, as bonds provides a much riskier investment opportunity it also guarantees a higher return as compared to stocks and Mfunds.

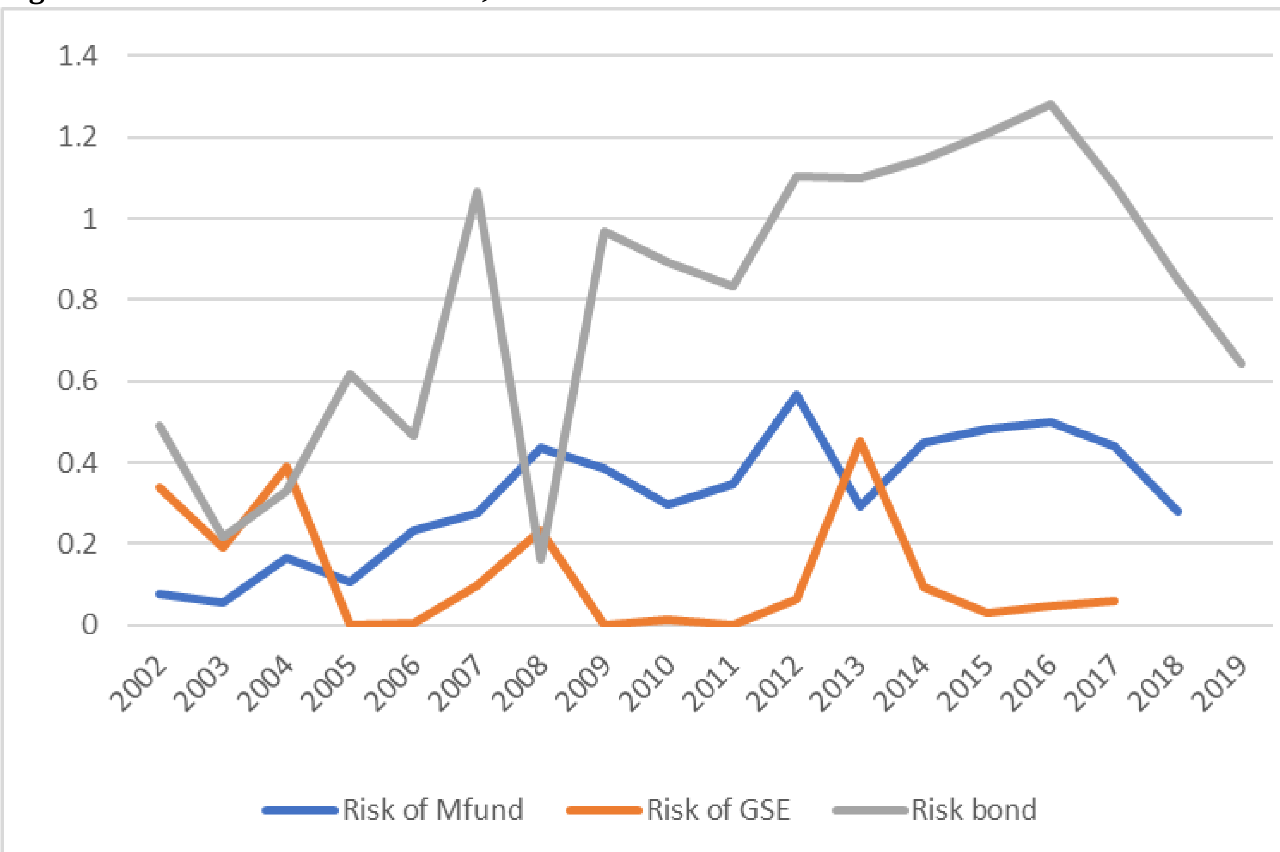
4.7 Risk orientation of the various classes of Assets

In theory, assets that guarantees higher returns equally has a higher risk orientation. This is because investors investing into that class of asset which is highly risky and deferring consumption should be rewarded with a higher return. This is similar to the Ghanaian asset market and other stocks, bonds, mutual funds and other classes of asset market around the world.

The figure 4.10 below provides the riskiness of the various classes of assets understudied in the Ghanaian market which includes bonds, mutual funds and stocks. In section 4.7, the study revealed that the bond market provides a longer period of maturity and rewards in Ghana. This is so because investors, given a longer maturity date risk enough to expect an equally higher return. Although, the government of Ghana bonds could be treated as risk free, this is not so for corporate bonds as the default rate of this bond given its value is high. From the figure 4.10 the riskiness of the bond market seems to rise high that that of the stock and mutual funds as it also rewards investors with higher returns. It is evident as bonds are issued by well-established corporation and government and not any mere investor.

Also, from figure 4.10, the mutual funds also seem to be slightly higher in terms of riskiness as compared to the stocks from the period of 2005- 2018. The Ghanaian mutual fund is upsurge in yields for short-term instruments with inconsistency in returns and highly volatile. This means that prices and returns given by the market forces are usually not stable as compared to bonds and shares and hence provides some reasonable level of risk.

Figure 4.10: The riskiness of Bonds, Mutual funds and Stocks



Source: Author's computation (2019)

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The chapter presents the final part of the study. This chapter present a comprehensive summary of major findings. It further provides a conclusion and makes relevant recommendations for policy makers and those in academia.

5.2 Summary of Major Findings

The study generally seeks to provide a comparative analysis of the performance of the various financial asset classes over the past decade in Ghana. To achieve this the study was motivated to examine the performance of the various classes of asset such as stocks, bonds and mutual funds in Ghana, provide an assessment of the risk associated to these various classes of assets (stocks, bonds and mutual funds) in Ghana, provide a comparative analysis of the classes of assets (stocks, bonds and mutual funds over the past decade in Ghana. From the results the following were revealed;

Performance of stock, bond and Mfund market

In assessing the performance of the various assets in Ghana, the study first considers the stocks traded on the Ghana stock exchange for a period of 24 years. With respect to the stocks, the stock market experiences a volatility in prices in the early years of trading with negative returns in 1990 to 1992. Again, in the year 1999, 2005, 2009 and 2011 returns also dropped into the negative zone with an average return of -15%, -30%, -47% and -3% respectively with 2009 experiencing the highest drop in returns. Apart from these years, the stock market has experienced an enormous return on stock over the years with 2003 being the highest of all returns with 155% followed closely by 1994 1nd 1993 with a percentage return of 124% and 114% respectively.

Further, the performance of the bond has improved since the first trading of Ghana Stock Exchange (GSE) commemorative registered stock in 1990. These bonds were five-year debt instruments issued to provide a foundation for active bond trading on the newly created GSE with an average percentage rate of 14.5% for the period. The study also revealed a steady rise in bond performance between 2009 and 2016; however, there was a sharp decline in bond performance towards the last quarter of 2016 till the end of 2018. This was mainly due to broad governance strategies of the separate governments in each period mentioned above and other macroeconomic factors like inflation, performance of the Ghana Stock Exchange and other general economic conditions.

Similar to the bond and stock market, the Mfund seems to have also improved over time. The Mfund's market performance has been encouraging although, it shows an inconsistency in the rise of Mfund. From the analysis the year 2012 to 2015 shows a sharp rise of approximately an average market price of 0.7 to 1.6 within the period. This could result from an economic condition of increasing inflation rate during the period, hence, many investors were incentivized with high rate of returns on their investment through the Mfund market with a corresponding increase in the price of the fund. Furthermore, the Mutual Fund market in Ghana became vibrant only recently due to growing financial literacy amongst Ghanaians, sophisticated fund management software and improved regulations.

A comparative analysis of the various assets

Shares or stock represent a stake in the ownership of a particular company. Bonds are the promise to pay back loan money for a set period of time at a fixed interest rate. The wholesome investment is recouped at the end of the set time period. Unlike shares, bonds provide a safer investment. The MFUND combines both stock and bound in the market to provide some level of flexibility to the investor.

Of all the three asset class bonds in Ghana is considered as the safest of all investment packages with a less risk orientation. This is evident as the bond curve is high above all other asset class in Ghana. This is followed closely by the Mfund as is a blend of both stocks and bond and could easily be diversifiable to suit the interest of the investor. The riskiest of all the class of asset is the stock traded on the exchange market. As investment vehicle provides means of investing capital with the aim of growing it, it should be considered that investors who take more risk take it with a high expectation of more returns. Therefore, as bonds provides a much riskier investment opportunity it also guarantees a higher return as compared to stocks and Mfunds.

Risk of the various classes of Assets

Assets that guarantees higher returns equally has a higher risk orientation. This is similar to the Ghanaian asset market and other stocks, bonds, mutual funds and other classes of asset market around the world. The study revealed that the bond market provides a longer period of maturity and rewards in Ghana. The riskiness of the bond market seems to rise high that that of the stock and mutual funds as it also rewards investors with higher returns. It is evident as bonds are issued by well-established corporation and government and not any mere investor. Also, the mutual funds also seem to be slightly higher in terms of riskiness as compared to the stocks from the period of 2005- 2018. The Ghanaian mutual fund is upsurge in yields for short-term instruments with inconsistency in returns and highly volatile. This means that prices and returns given by the market forces are usually not stable as compared to bonds and shares and hence provides some reasonable level of risk.

5.3 Conclusion

Securities on the financial market have improved significantly in major economies as it provides economic boost to nations. Investors also, have recently seen much improvement in their returns as they engage in the financial market. Therefore, this study sought to provide a comparative analysis of the performance of the various financial asset classes over the past decade in Ghana. In the quest to achieve this, the study was motivated to examine the performance of the various classes of asset such as stocks, bonds and mutual funds in Ghana, provide an assessment of the risk associated to these various classes of assets (stocks, bonds and mutual funds) in Ghana, provide a comparative analysis of the classes of assets (stocks, bonds and mutual funds over the past decade in Ghana.

The study employed a quantitative technical trend analysis on bond, stocks and Mfund over a period of 10years. Also, the econometric model of GARCH (1,1) was employed to calculate the risk orientation of the various asset classes. From the results, the study found that the three classes of assets employed for the study, that is bond, stocks and Mfund on the average seems to be performing well on the financial market over the years. Comparatively the study also found that of all the three asset class bonds in Ghana offered by the government is considered as the safest and the best performing financial assets of all investment packages with a less risk orientation. Evidently, assets that guarantees higher returns equally has a higher risk orientation. The study revealed that the bond market provides a longer period of maturity and rewards in Ghana. The riskiness of the bond market seems to rise high that that of the stock and mutual funds as it also rewards investors with higher returns.

5.4 Recommendations

From the study findings, the research sought to make the following recommendations for policy makers and academia.

In the study, it was found that as macro-economic variable such as inflation increase it forces surplus investors to expect higher return on their financial asset through an increase in interest rate. This tend to reduce the demand for the various financial assets. Therefore, monetary and fiscal structures from the central bank and government should be efficiently monitored and developed to control the macro-economic variables in the economy.

Again, the study found that through proper information dissemination, education on the usefulness of owning and acquiring financial assets the performance of the sampled class saw a significant push in their performance. Therefore, institutions such as the Ghana Stock exchange and the Securities and Exchange Commission should employ a well-structure program to sensitize the public on the relevance of financial assets to the economic development of Ghana.

Additionally, fund managers of various asset class should be effectively monitored and regulated to adhere to the ethical principle of the profession. This will bring sanity within the investment environment to prevent undue advantage fund managers take as a result of their agency relationship with investors. This reduces the trust within the investment environment.

REFERENCES

Afful, S. B. (2015). An Investigation of Random Walk Hypothesis of Stock Prices on the Ghana Stock Exchange.

Ang, A., Chen, J. & Xing, H. (2006). Downside Risk. Review of Financial Studies, 19(4):1191-1239.

Ansah, A. Y. (2015). Corporate Governance and Performance of Mutual Funds in Ghana.

Brown, K. C., Garlappi, L., & Tiu, C. (2010). Asset allocation and portfolio performance: Evidence from university endowment funds. Journal of Financial Markets, 13(2), 268–294. https://doi.org/10.1016/j.finmar.2009.12.001

Copeland, T. E., Weston, J. F., & Shastri, K. (1983). Financial theory and corporate policy (Vol. 3).

Copeland, T. F & Weston J.F. (1988): Financial Theory and Corporate Policy, Addison-Wesley, West Sussex (ISBN 978-0321223531)

Copeland, T. F & Weston J.F. (1988): Financial Theory and Corporate Policy, Addison-Wesley, West Sussex (ISBN 978-0321223531)

Elton, E. J., Gruber, M. J., Brown, S.J. & Goetzmann W.N. (2003): Modern Portfolio Theory and Investment Analysis, John Wiley & Sons, New York (ISBN 978-0470050828)

Elton, E. J., Gruber, M. J., Brown, S.J. & Goetzmann W.N. (2003): Modern Portfolio Theory and Investment Analysis, John Wiley & Sons, New York (ISBN 978-0470050828)

Fama E., F. (1976): Foundations of Finance, Basic Books Inc., New York (ISBN 978-0465024995)

Fama E., F. (1976): Foundations of Finance, Basic Books Inc., New York (ISBN 978-0465024995)

Groz, M. M. (2009): Forbes Guide to the Markets, John Wiley & Sons, Inc., New York (ISBN 978-0470463383)

Groz, M. M. (2009): Forbes Guide to the Markets, John Wiley & Sons, Inc., New York (ISBN 978-0470463383)

Jagric, T., Podobnik, B., Strasek, S., & Jagric, V. (2007). Risk-Adusted Performance of Mutual Funds: Some Tests. South-Eastern Europe Journal of Economics, 2, 233–244.

Jensen, M. C. (1967). Performance of Mutual Funds in the period 1945-1964. Journal of Finance, 23(2), 389–416.

Keith Pilbeam (2010) Finance and Financial Markets, Palgrave (ISBN 978-0230233218)

Keith Pilbeam (2010) Finance and Financial Markets, Palgrave (ISBN 978-0230233218)

Lizarazo, S. V. (2013). Default risk and risk averse international investors. Journal of International Economics, 89(2), 317–330. https://doi.org/10.1016/j.jinteco.2012.08.006

Markowitz, H. (1952). Portfolio selection. The Journal of Finance, 7(1).

McKerrow, R. (2013). Random walks in frontier stock markets. Ghanaian Journal of Economics, 1(1), 87–103.

Merton R. C. (1992): Continuous-Time Finance, Blackwell Publishers Inc. (ISBN 978-0631185086)

Merton R. C. (1992): Continuous-Time Finance, Blackwell Publishers Inc. (ISBN 978-0631185086)

Prajapati, K. P., & Patel, M. K. (2012). Comparative Study on Performance Evaluation of Mutual Fund Schemes of Indian Companies. Journal of Arts, Science & Commerce, 3, 4686.

Reference

Sharpe, W. F. (1964). Capital Asset Prices: A Theory of Market Equilibrium under Conditions of Risk. Journal of Finance, XIX(3), 425–442.

The Business Finance Market: A Survey, Industrial Systems Research Publications, Manchester (UK), new edition 2002 (ISBN 978-0-906321-19-5)

Thobejane, B. M. (2012). Performance evaluation of equity unit trusts in South Africa.

Treynor, J. L. (1965). How to rate management of investment funds. Harvard Business Review, 43(1), 63–75.

Valdez, S (2009). An Introduction To Global Financial Markets, Macmillan Press Ltd. (ISBN 0-333-76447-1)

Valdez, S (2009). An Introduction To Global Financial Markets, Macmillan Press Ltd. (ISBN 0-333-76447-1)

Wafula, F. J. (2014). The Effect of Diversification on Portfolio Returns of Mutual Funds in Kenya.